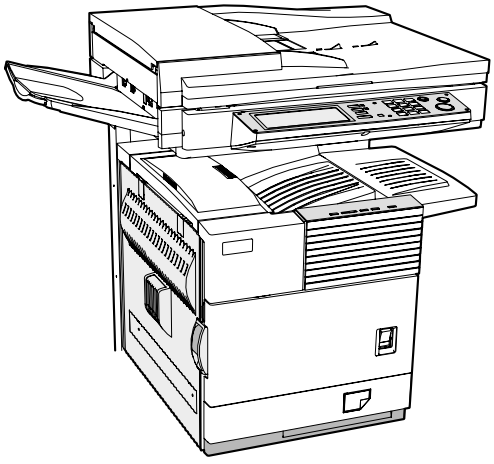
# SHARP SERVICE MANUAL

CODE : 00ZARM350UA1E



# LASER PRINTER

## AR-M350U/M450U
## MODEL AR-M350N/M450N

**OPTIONS AR-P14**

Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

**SHARP CORPORATION**

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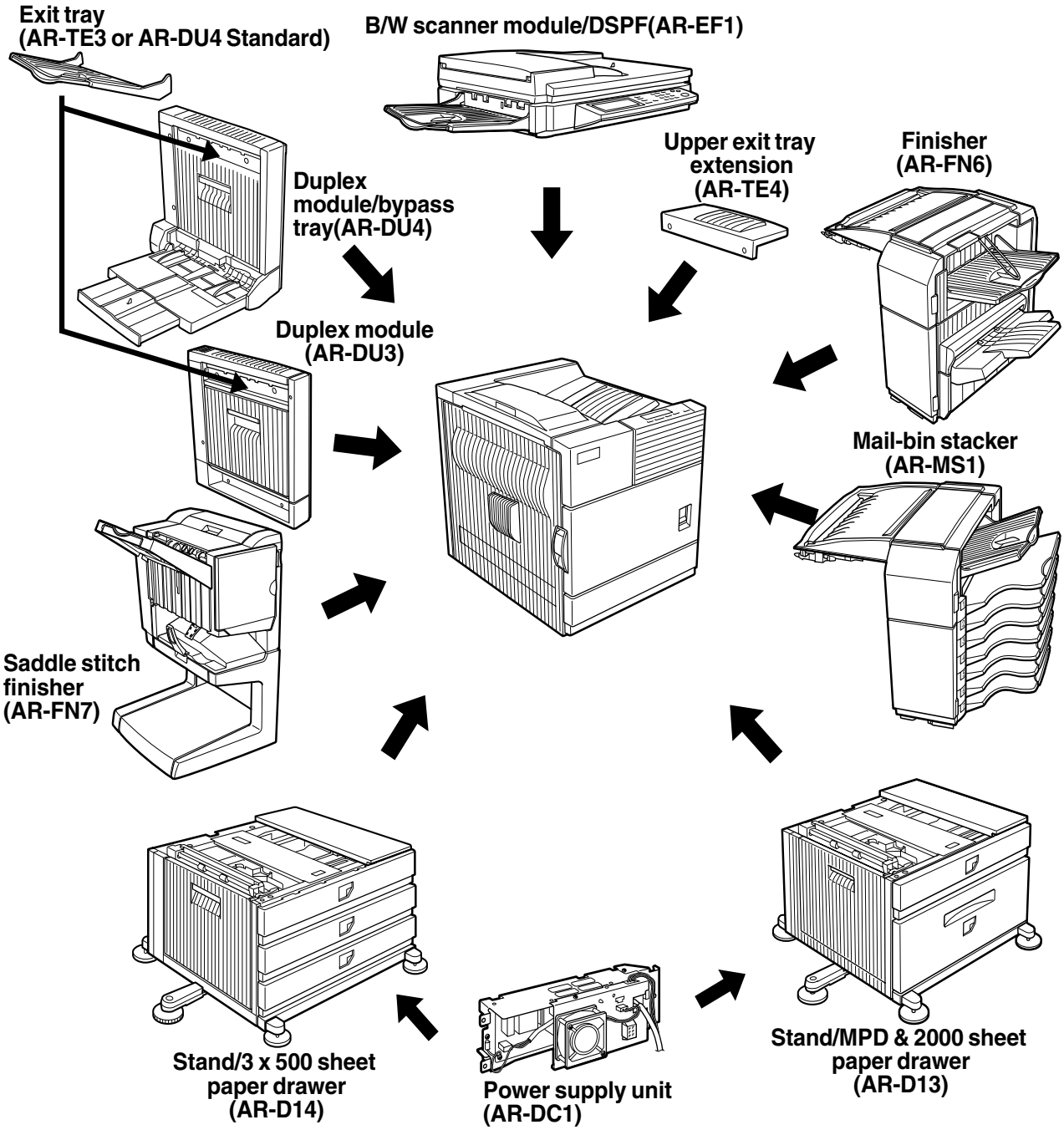
# [3] CONFIGURATION

## 1.System Configurations




## 2. Standard

| Category | Model Name | Other options required for the installation/mounting.<br>(Options must be ordered separately.) | Remarks |
|---|---|---|---|
| MFP model (35ppm) | AR-M350 | • B/W Scanner module/DSPF (AR-EF1)<br>• Scanner Rack(AR-RK1)<br>• Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14)<br>• Power supply unit (AR-DC1) | |
| MFP model (45ppm) | AR-M450 | | |
| MFP model (35ppm) | AR-M350U | | |
| MFP model (45ppm)<br>(Without network printer function) | AR-M450U | | |
| MFP model (35ppm)<br>(With NIC card (standard)) | AR-M350N | | |
| MFP model (45ppm) | AR-M450N | | |

## 3. List of combination of peripheral devices

### A.AR-M350U/M450U

As shown in the table below, some other peripheral devices ( B ) may be needed for installation of a peripheral device ( A ) and some peripheral devices cannot be installed together.

| | | | B | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B/W scanner module/DSPF | Scanner rack | Stand/3 x 500 sheet paper drawer | Stand/MPD & 2000 sheet | Duplex module/bypass tray | Duplex module | Saddle stitch finisher | Finisher | Mail-bin stacker | Exit tray | Upper exit tray extension | Punch unit | Multi-function controller board | Print server card | PS3 expansion kit | Network scanner expansion kit | Facsimile expansion kit | Fax memory (8 MB) | Power supply unit | Hard disk drive | Network printer kit |
| | Related for scanner feature | | | | | | | | | | | | | | | | | | | | | | |
| A | B/W scanner module/DSPF | AR-EF1 | — | ○ | ○*1 | | | | | | | | | | ○ | | | | | | ○ | | |
| A | Scanner rack | AR-RK1 | ○ | — | ○*1 | | | | | | | | | | ○ | | | | | | ○ | | |
| | Related for paper feed unit | | | | | | | | | | | | | | | | | | | | | | |
| A | Stand/3 x 500 sheet paper drawer | AR-D14 | | | — | × | | | | | | | | | | | | | | | ○ | | |
| A | Stand/MPD & 2000 sheet paper drawer | AR-D13 | | | × | — | | | | | | | | | | | | | | | ○ | | |
| A | Duplex module/bypass tray | AR-DU4 | | | ○*1 | | — | | × | | | | | × | | | | | | | ○*2 | | |
| A | Duplex module | AR-DU3 | | | ○*1 | | | — | | | | | | | | | | | | | ○*2 | | |
| | Output units | | | | | | | | | | | | | | | | | | | | | | |
| A | Saddle stitch finisher | AR-FN7 | | | ○*1 | | × | ○ | — | × | | × | × | | | | | | | | ○ | | |
| A | Finisher | AR-FN6 | | | ○*1 | | | | × | — | × | | × | × | | | | | | | ○ | | |
| A | Mail-bin stacker | AR-MS1 | | | ○*1 | | | | | × | — | | × | | | | | | | | ○ | | |
| A | Exit tray *4 | AR-TE3 | | | | | ○*1 | | × | × | × | — | | × | | | | | | | | | |
| A | Upper exit tray extension | AR-TE4 | | | | | | | | × | × | | — | | | | | | | | | | |
| A | Punch unit | AR-PN1 | | | ○*1 | | × | ○ | ○ | × | | × | | — | | | | | | | ○ | | |
| | Related for extension of functions and others | | | | | | | | | | | | | | | | | | | | | | |
| A | PS3 expansion kit | AR-PK1 | | | | | | | | | | | | | | | — | | | | | | |
| A | Network scanner expansion kit | AR-NS2 | ○ | ○ | ○*1 | | | | | | | | | | | ○ | | — | | | | | |
| A | Facsimile expansion kit | AR-FX5 | ○ | ○ | | ○*1 | | | | | | | | | | | | | — | | | | |
| A | Fax memory (8 MB) | AR-MM9 | ○ | ○ | | ○*1 | | | | | | | | | | | | | ○ | — | ○ | | |
| A | Power supply unit | AR-DC1 | | | | ○*1 | | | | | | | | | | | | | | | — | | |
| A | Hard disk drive | AR-HD3 | | | | | | | | | | | | | | | | | | | | — | |
| A | Multi-function controller board *5 | AR-M11 | ○ | ○ | | ○*1 | | | | | | | | | — | | | | | | | | × |
| A | Print server card *6 | AR-NC5J | | | | | | | | | | | | | | — | | ○*1 | | | | | ○*1 |
| A | Network printer kit | AR-P14 | | | | | | | | | | | | | | ○ | | | | | | | — |

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*5 = Attachment of the AR-P14 provides the similar functions.
*6 = Not Available

## B.AR-M350N/M450N

As shown in the table below, some other peripheral devices ( B ) may be needed for installation of a peripheral device ( A ) and some peripheral devices cannot be installed together.

| A | | | B: B/W scanner module/DSPF | Scanner rack | Stand/3 x 500 sheet paper drawer | Stand/MPD & 2000 sheet | Duplex module/bypass tray | Duplex module | Saddle stitch finisher | Finisher | Mail-bin stacker | Exit tray | Upper exit tray extension | Punch unit | Multi-function controller board | Print server card | PS3 expansion kit | Network scanner expansion kit | Facsimile expansion kit | Fax memory (8 MB) | Power supply unit | Hard disk drive | Network printer kit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Related for scanner feature | | | | | | | | | | | | | | | | | | | | | | | |
| B/W scanner module/DSPF | AR-EF1 | | — | ○ | ○*1 | | | | | | | | | | ○ | | | | | | ○ | | |
| Scanner rack | AR-RK1 | | ○ | — | ○*1 | | | | | | | | | | ○ | | | | | | ○ | | |
| Related for paper feed unit | | | | | | | | | | | | | | | | | | | | | | | |
| Stand/3 x 500 sheet paper drawer | AR-D14 | | | | — | × | | | | | | | | | | | | | | | ○ | | |
| Stand/MPD & 2000 sheet paper drawer | AR-D13 | | | | × | — | | | | | | | | | | | | | | | ○ | | |
| Duplex module/bypass tray | AR-DU4 | | | | ○*1 | | — | | × | | | | | × | | | | | | | ○*2 | | |
| Duplex module | AR-DU3 | | | | ○*1 | | | — | | | | | | | | | | | | | ○*2 | | |
| Output units | | | | | | | | | | | | | | | | | | | | | | | |
| Saddle stitch finisher | AR-FN7 | | | | ○*1 | | × | ○ | — | × | | × | × | | | | | | | | ○ | | |
| Finisher | AR-FN6 | | | | ○*1 | | | | × | — | × | | × | × | | | | | | | ○ | | |
| Mail-bin stacker | AR-MS1 | | | | ○*1 | | | | | × | — | | × | | | | | | | | ○ | | |
| Exit tray *4 | AR-TE3 | | | | | | ○*1 | | × | × | × | — | | × | | | | | | | | | |
| Upper exit tray extension | AR-TE4 | | | | | | | | | × | × | | — | | | | | | | | | | |
| Punch unit | AR-PN1 | | | | ○*1 | | × | ○ | ○ | × | | × | | — | | | | | | | ○ | | |
| Related for extension of functions and others | | | | | | | | | | | | | | | | | | | | | | | |
| PS3 expansion kit | AR-PK1 | | | | | | | | | | | | | | | | — | | | | | | |
| Network scanner expansion kit | AR-NS2 | | ○ | ○ | ○*1 | | | | | | | | | | | ○ | | — | | | | | |
| Facsimile expansion kit | AR-FX5 | | ○ | ○ | ○*1 | | | | | | | | | | | | | | — | | | | |
| Fax memory (8 MB) | AR-MM9 | | ○ | ○ | ○*1 | | | | | | | | | | | | | | ○ | — | ○ | | |
| Power supply unit | AR-DC1 | | | | ○*1 | | | | | | | | | | | | | | | | — | | |
| Hard disk drive | AR-HD3 | | | | | | | | | | | | | | | | | | | | | — | |
| Multi-function controller board *3 | AR-M11 | | ○ | ○ | ○*1 | | | | | | | | | | — | | | | | | | | |
| Print server card *3 | AR-NC5J | | | | | | | | | | | | | | | — | | | | | | | |
| Network printer kit *6 | AR-P14 | | | | | | | | | | | | | | | | | | | | | | — |

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*6 = Cannot be attached.

# [4] SPECIFICATIONS

## 1. Basic Specification

### A. Base Engine (AR-M350U/M350N/M450U/M450N)

#### (1) Form

| | |
|---|---|
| AR-M350U/M350N/M450U/M450N | Console type |

#### (2) Engine speed

| Paper size | AR-M350U/N | AR-M450U/N |
|---|---|---|
| A4, 8.5" x 11" | 35ppm | 45ppm |
| A5R/5.5" x 8.5"R | 35ppm | 45ppm |
| B5 | 35ppm | 45ppm |
| B4/8.5" x 14 | 20ppm | 22ppm |
| A3/11" x 17" | 17ppm | 20ppm |

#### (3) Engine composition

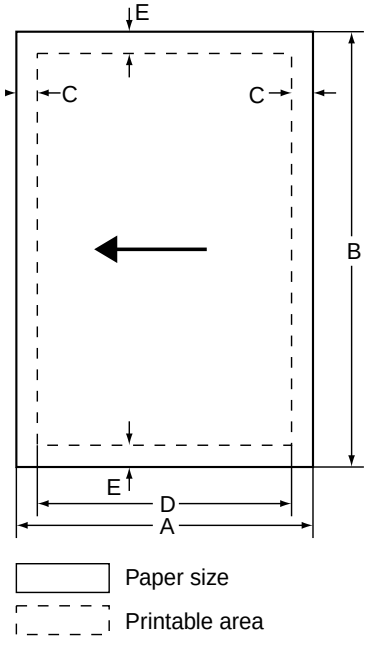
| | |
|---|---|
| Photoconductor type | OPC (diameter of photoconductor : ø30mm) |
| Record method | Electrophotograph (laser) |
| Development method | Dry-type dual-component magnetic brush development |
| Charge method | Charged saw-tooth method |
| Transfer method | Transfer roller |
| Cleaning method | Counter blade |
| Fusing method | Heat roller |
| Used toner disposal | Toner recycling system |

#### (4) Engine resolution

| | |
|---|---|
| Resolution | Write :600dpi |
| Smoothing | Write :1200dpi equivalent |
| Gradation | Write :2 levels |

#### (5) Printable area

The print area of this product is shown below.




If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

| Paper size | A | B | C | D | E |
|---|---|---|---|---|---|
| A3 | 297 | 420 | 4 | 289 | 4 |
| B4 | 257 | 364 | 4 | 242 | 4 |
| A4 | 210 | 297 | 4 | 202 | 4 |
| B5 | 182 | 257 | 4 | 168 | 4 |
| A5 | 148 | 210 | 4 | 140 | 4 |
| Japanese postcard | 100 | 148 | 4 | 92 | 4 |
| Ledger | 279 | 432 | 4 | 271 | 4 |
| Legal | 216 | 356 | 4 | 208 | 4 |
| Foolscap | 216 | 330 | 4 | 208 | 4 |
| Letter | 216 | 279 | 4 | 208 | 4 |
| Executive | 184 | 267 | 4 | 183 | 4 |
| Invoice | 140 | 216 | 4 | 132 | 4 |
| Com-10(envelope) | 105 | 241 | 4 | 97 | 4 |
| C5(envelope) | 162 | 229 | 4 | 154 | 4 |
| Monarch(envelope) | 98 | 191 | 4 | 90 | 4 |
| DL(envelope) | 110 | 220 | 4 | 102 | 4 |
| ISO B5(envelope) | 176 | 250 | 4 | 168 | 4 |

#### (6) Warm-up

| | |
|---|---|
| Warm-up time | less than 80 seconds |
| Pre-heat requirement | Required |
| Jam recovery time | Target: about 30 seconds<br>(Under standard condition of 60 seconds left after side cover opening, polygon motor halt) |

#### (7) Power source

| | | |
|---|---|---|
| Voltage | 100V system | 200V system |
| | 100-127V | 220-240V |
| Frequency | 50/60Hz | 50/60Hz |

#### (8) Power consumption

| | AR-M350U/N | AR-M450U/N |
|---|---|---|
| Max. Power consump. | 1440W | 1440W |

#### (9) Energy Star benchmark

| | AR-M350U/N | AR-M450U/N |
|---|---|---|
| Low power mode | 40W | 75W |
| Transition time to Low power mode | 60min | 60min |

#### (10) Noise

| | AR-M350U/N | AR-M450U/N |
|---|---|---|
| At working | less than 6.8B | less than 6.8B |
| At waiting mode | less than 5.0B | less than 5.0B |

* Showing noise benchmark in each model as a whole system.

#### (11) Dimensions

| | |
|---|---|
| External dimensions (WxDxH) | 428x552x469 (Only main unit) (mm)<br>16.9"x21.7"x18.5" |
| Occupied space dimensions (WxD) | 963x685 (mm) *1<br>25.7"x22.3" |
| Weight | AR-M350U/M450U:Approx.38.9kg<br>(Only main unit)<br>Approx.99kg *1<br>AR-M350N/M450N:Approx.39.9kg<br>(Only main unit)<br>Approx.100kg *1 |

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

## B. Document Feeding Equipment

### (1) One-drawer tray (included in the base engine)

| | | |
|---|---|---|
| Paper feed method | One-drawer tray | |
| Sizes to be fed | A4, B5, 8.5" x 11" | |
| Paper capacity | 500 sheets (at 80g/m²) | |
| Media available for paper feeding | Plain paper 60 - 105g/m², 16 - 28lbs | |
| Paper type | Plain, recycled, pre-printed, pre-punched, color, letter head | |
| Paper size switching | To be switched by user (paper size to be entered from the operation panel). | |
| Dehumidification heater | Not provided | |
| Balance detection | Provided (paper empty and 3 steps) | |
| Default size setting | 100V system | 200V system |
| | 8.5" x 11" | A4 |
| Mounting/demounting of the tray | Provided | |

## C. Output Equipment

### (1) Face-down Exit Tray (included in the base engine)

| | |
|---|---|
| Output position/ method | Face-down output at the upper side of main unit |
| Output paper capacity | 400 sheets (80g/m² sheet) |
| Output paper size | A3, B4, A4, A4R, B5, B5R, A5R<br>11 " x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11 ", 8.5" x 11 "R, 5.5" x 8.5"R<br>Executive, postal card, Monarch (98 x 191)<br>Com-10 (105 x 241), DL (110 x 220),<br>C5 (162 x 229), ISO B5 (176 x 250) |
| Spec of media for paper output | Tracing paper : 52 ~ 59g/m² / 14 ~ 15lbs<br>Plain paper : 60 ~ 128g/m² / 16 ~ 34lbs<br>Index paper : 176g/m² / 47lbs<br>Cover paper : 205g/m² / 54 ~ 55lbs<br>Transparency firm |
| Remaining paper detection | Not provided |
| Exit tray full detection | Provided |

# 2. Specific Function

## A. Printer Function

### (1) Platform

| |
|---|
| IBM PC/AT (Include compatible machine)<br>Macintosh (680x0), Power Macintosh, iMac, G3Macintosh |

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

### (2) Support OS

| | |
|---|---|
| Custom PS | Windows 95/98/Me/XP |
| | Windows NT 4.0<br>Windows 2000 |
| Custom<br>PCL5e/6(XL)<br>SPDL | Windows 95/98/Me/XP |
| | Windows NT 4.0<br>Windows 2000 |
| PPD | Windows 95/98/Me/XP |
| | Windows NT 4.0<br>Windows 2000 |
| | Mac OS 8.5.1 - Mac OS 9 |

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

### (3) PDL emulation

| |
|---|
| PCL6, PCL5e compatible,<br>PostScript Level 2, PostScript 3 compatible<br>(PS3 expansion kit is required.) |

### (4) Print Function

#### a. General

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Copies | 1 - 999 | 1 - 999 | 1 - 999 | 1 - 999 |
| Orientation | Yes | Yes | Yes | Yes |
| Duplex print | Yes | Yes | Yes | Yes |
| Saddle stitch | Yes | Yes | No | N/A |
| Binding edge | Left/top/ right | Left/top/ right | Long/short | Long/short |
| N-up | 2/4/6/8 | 2/4/6/8 | 2/4*3*4 | 2/4/6/9/16 |
| N-up direction | Fixed | Fixed | Fixed | Selectable |
| N-up border line | Yes | Yes | Yes(always) | Yes |

#### b. Paper input

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Paper size | Yes | Yes | Yes | Yes |
| Custom paper size | 1 size | 1 size | 3 sizes*3*5 | N/A |
| Source selection | Yes | Yes | Yes | Yes |
| Different first page | Yes | Yes | N/A | Yes |
| Transparency inserts | Yes | Yes | N/A | Yes |

#### c. Paper output

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Output tray selection | Yes | Yes | Yes | Yes |
| Mail bin | Yes | Yes | Yes | Yes |
| Staple | Yes | Yes | Yes | Yes |
| Offset | Yes | Yes | Yes | Yes |
| Punch | Yes | Yes | Yes | Yes |

#### d. Graphic

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Resolution | 600/300 dpi | 600 dpi | 600 dpi | 600 dpi |
| Halftone | N/A | Yes | Yes | N/A |
| Graphic mode | Yes | N/A | N/A | N/A |
| Smoothing | Yes | Yes | Yes | Yes |
| Toner save | Yes | Yes | Yes | Yes |
| Photo enhancement | Yes*8 | Yes | N/A | N/A |
| Negative image | N/A | Yes | Yes | Yes |
| Mirror image | N/A | Horizontal/ vertical | Horizontal | Yes |
| Zoom | N/A | N/A | Yes | Yes |
| Fit to page | Yes | Yes | N/A | N/A |

**e. Font**

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Resident font | 45 fonts | 136 fonts | 136 fonts*6 | 35 fonts |
| Download font | Bitmap TrueType, Graphic | Bitmap Type1 TrueType | Bitmap Type1 TrueType | N/A |

**f. Others**

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Watermark*7 | Yes | Yes | Yes | Yes |
| Overlay | Yes | Yes | N/A | N/A |
| Job retention*1 | Yes | Yes | N/A | Yes |
| Account control | Yes | Yes | N/A | Yes |
| Custom settings | Yes | Yes | N/A | N/A |
| Automatic configuration*2 | Yes | Yes | N/A | Yes |
| Job end notification | Yes | Yes | N/A | N/A |

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .
* 2 Functions when peripheral devices are installed.
* 3 Not supported in the Windows NT 4.0 environment.
* 4 2/4/6/9/16 is supported in the Windows 2000 environment.
* 5 Only one size is supported in the Windows 2000 environment.
* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.
* 7 This function is limited for PPD.
* 8 PCL6 only

### (5) Compatibility

| | |
|---|---|
| PCL 5e compatibility | Target for PCL5e is to be compatible with HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.<br>All the PJL commands are not necessarily included in the compatibility. |
| PCL6 compatibility | Target for PCL6 is to be compatible with HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.<br>All the PJL commands are not necessarily included in the compatibility. |
| PostScript Compatibility | Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. |

## B. Expanded RAM

Installation of an expanded RAM will avoid the following status.

1) Time out error reduction
2) Spool time reduction
3) Avoidance of VM error / memory full

Use commercially available RAM with the following specifications.
Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

**<Spesification>**

| | |
|---|---|
| DIMM TYPE | 168pin 3.3V Unbuffered SDRAM DIMM Non-ECC |
| DIMM capacity | 64MByte, 128MByte, 256MByte |
| CAS LATENCY | CL=2 |
| SDRAM CLOCK | For PC100, PC133 |
| SPD | Supporting |
| Parity | Not support |
| ECC | Not support |

**<Operation-assured Memory> (As of March / 2001)**

| Manufacture | Capacity | Model name | RAM CHIP name | Note |
|---|---|---|---|---|
| Kingston Technology | 128MB | KVR133X64C3/ 128 | HYB39S64800BT -7.5 | |
| | 128MB | KVR133X64C3 -128 | D456821G-A75 -9JF | |
| | 256MB | KVR133X64C3 -256 | HY57V28820AT-H | |
| Viking Compornents | 64MB | VIK8641CL2 | µPD456841G5 -A80-9JF | |
| | 64MB | VIK8641CL2 | D456841G5-A80 -9JF | |
| | 128MB | VIK6642CL2 | TC59SM708FT-80 | |
| | 128MB | VIK6642CL2 | D4564841G5-A80 -9JF | |
| | 256MB | VIK2642CL2 | TC59SM708FT-80 | |
| Memory Card Technology | 64MB | DM864VS65804X -7G | GM72V66841XT75 | |
| | 128MB | DM1665VS65804 X-7G | HY57V64820HG | |

## C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

### (1) Scanner function

| | |
|---|---|
| Scanner mode | Scan to E-mail (Internet FAX)<br>Scan to Server (Client PC) |

### (2) Support System

| | |
|---|---|
| Embedded server | SMTP server<br>FTP server |
| Protocol | TCP/IP |

### (3) Support Image

| | |
|---|---|
| Format | TIFF, PDF, TIFF-F<br>* Selectable for each page |
| Compression method | Uncompressed, G3(1-dimension) *1, G4 *2<br>*1 G3 (1-dimension) = MH (Modified Huffman)<br>*2 G4 = MMR (Modified MR) |

### (4) Transmission Mode

| | |
|---|---|
| DSPF/OC transmission switching | Available<br>(Switching during the reading is not feasible) |

### (5) Image Process

| | |
|---|---|
| Half tone reproduction | Equivalent to 256 levels |
| Exposure adjustment | Light / Auto / Dark |
| Quality selection | Half-tone ON/OFF |
| Resolution* | Normal ( 200x200dpi )<br>Fine ( 300x300dpi )<br>Super fine ( 400x400dpi )<br>Ultra fine ( 600x600dpi )<br>Varies with the file type/transmission method |

### (6) Original Memory

| | |
|---|---|
| Standard | Commonly use ERDH area of memory. |
| Memory expansion | Special : As per ERDH memory |

### (7) Specified Destination

| | |
|---|---|
| Specified destination | Specifying by one-touch or group |
| One-touch* | Max. 500 destinations<br>(in conjunction with the one-touch dial of FAX)<br>Max. 100 destinations can be registered for FTP and Desktop. |
| Group* | To be registered in one-touch |
| Program | Available |

### (8) Specified Multiple Destinations

| | |
|---|---|
| Specified destination | Specifying by one-touch or group |
| No. of registration | Max. 300 items<br>(in conjunction with those of FAX) |
| Sequential broadcasting | Available<br>(E-mail only. It is not available for FTP/Desktop.) |
| Simultaneous FAX transmission | Available<br>(Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan) |

O : Available

### (9) Functions

| | | |
|---|---|---|
| Transmitting functions | Rotating transmission | Available<br>(to be matched with FAX specification) |
| | Long length original transmission | Not Available |
| | Verification stamp function | Option |
| Report/list functions | Transmit/receive record | Available |
| | Transmit/receive result | Available |
| | Address/phone directory list | Available |
| | Group list | Available |
| | ID/sender list | Available |
| | Program list | Available |

## D. Copy function

### (1) Copy Speed

| | AR-M350U/N | | | AR-M450U/N | | |
|---|---|---|---|---|---|---|
| | Actual | Reduction | Enlargement | Actual | Reduction | Enlargement |
| A4, 8.5"x11" | 35 | 35 | 35 | 45 | 45 | 45 |
| A4R, 8.5"x11"R | 25 | 25 | 25 | 30 | 30 | 30 |
| A5R, 5.5"x8.5"R, Invoice-R | 35 | 35 | 35 | 45 | 45 | 45 |
| B5 | 35 | 35 | 35 | 45 | 45 | 45 |
| B5R, Exective-R | 25 | 25 | 25 | 30 | 30 | 30 |
| B4, 8.5"x14" | 20 | 20 | 20 | 22 | 22 | 22 |
| A3, 11"x17" | 17 | 17 | 17 | 20 | 20 | 20 |
| Extra, Envelope | 17 | 17 | 17 | 20 | 20 | 20 |
| Japan P/C | In case of printing on post card, engine speed can vary with system configuration, because next paper is fed after machine completely output previous page. | | | | | |

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

### (2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

| | AR-M350U/N | AR-M450U/N |
|---|---|---|
| Document glass *1 | Less than 5.3 seconds | Less than 4.6 seconds |
| DSPF | Less than 6.0 seconds | Less than 5.3 seconds |

*1 During OC/high-speed mode

### (3) Job Speed

| | AR-M350U/N | AR-M450U/N |
|---|---|---|
| S → S *1 | 33 cpm (94%) | 42 cpm (93%) |
| S → D *2 | 32 cpm (91%) | 40 cpm (88%) |
| D → D *3 | 32 cpm (91%) | 40 cpm (88%) |

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets
*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets
*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

### (4) Continuous Copy

| | |
|---|---|
| Max. multiple number | 999 pages |

### (5) Copy Ratio

| | |
|---|---|
| Copy ratio | AB series :<br>25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400%<br>Inch series :<br>25%, 64%, 77%, 100%, 121%, 129%, 400% |
| Zoom | 25 - 400%<br>25 - 200% (Copy from DSPF) |
| Independent scaling | Not provided |

### (6) Exposure/Copy Quality Process

| | |
|---|---|
| Exposure mode | Binary: Text(auto/manual), Text/photo, Photo<br>256 levels: Not provided |
| Manual steps | 9 steps |
| Smoothing | Standard |
| Toner save mode | Standard |

**(7) Copy Function**

| | | |
|---|---|---|
| Function | APS | Standard Function |
| | AMS | Standard Function |
| | Paper type select | Standard Function<br>(By type setting) |
| | Auto tray switching | Standard Function |
| | Rotation copy | Standard Function |
| | Electronic sort | Standard Function |
| | Rotation sort | Not provided |
| | Reserved copy | Standard Function |
| | Prior tray setting | Not provided |
| | Recall/register of program | Standard Function |
| | Proof copy | Not provided |
| | Preheat function | Standard Function<br>(To be set up by key operator) |
| | Auto power shut-off function | Standard Function<br>(To be set up by the key operator program) |
| | Account control | Standard Function<br>(100 accounts) |
| | Communication support (RIC) | Standard Function |
| | Card counter support | Only<br>provided the connector |
| | Coin vendor support | Only<br>provided the connector |
| Special function | Margin shift | Standard Function |
| | Edge erase / Center erase | Standard Function |
| | Dual page copying | Standard Function |
| | Covers | Not provided |
| | Transparency insert | Not provided |
| | Centering | Not provided |
| | Multi shot (N in 1) | Standard Function<br>(2 in 1 / 4 in 1) |
| | Pamphlet copy | Standard Function |
| | 2-sided copy orientation change | Standard Function |
| | Large capacity original mode | 0 (Max. 140 pages) |
| | B/W reverse | Not provided |
| | Shading | Not provided |
| | Mirror image | Not provided |
| | Repeat | Not provided |
| | Date stamp | Not provided |
| | Stamp | Not provided |
| | Page stamp | Not provided |
| | Zaurus print | Not provided |

# [5] CONSUMABLE PARTS

## 1.Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 and the AR-P350/P450.

### A.USA

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450NT<br>(*1 AR-450NT-J) | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450ND | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K maintenance kit | Cleaner blade | x1 | 50K | AR-450KC1 | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K maintenance kit | Transfer roller | x1 | 100K | AR-450KA1 | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | Upper heat roller kit | Upper heat roller | x1 | 200K | AR-450UH | |
| | | Fusing separation pawl (Upper) | x4 | | | |
| 7 | Lower heat roller kit | Lower heat roller | x1 | 200K | AR-450LH | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| 8 | Cleaner blade | Cleaner blade | x10 | 50K(x10) | AR-450CB | AR-450CB=(AR-450BL)x10 |
| 9 | Cleaning roller | Cleaning roller | x10 | 200K(x10) | AR-450CR | AR-450CR=(AR-450RC)x10 |
| | | Bearing | x20 | | | |
| 10 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 11 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

### B.Europe

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450T | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450DV | |
| 3 | Drum | Drum | x1 | 50K | AR-450DM | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

## 2.Production number identification

### A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

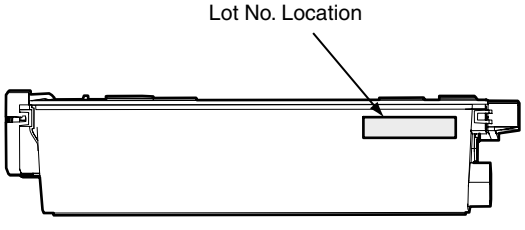
1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. T for this model.
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

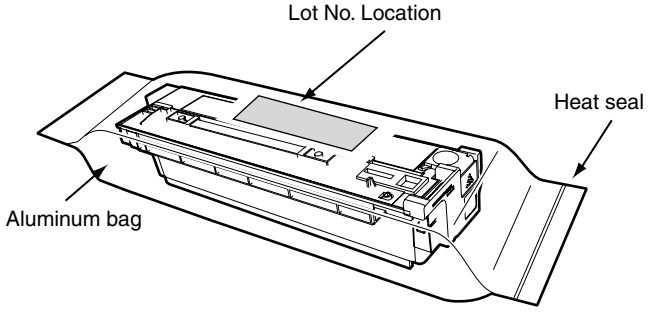
### B. Toner cartridge

The lot number is composed of 7 digits, and each digit indicates as following.
The lot number shall is printed in the position shown below.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

1 Version number (A - sequentially revised)
2 Numeral figure
Indicates the end digit of the production year.
3 Alphabet
Indicates the production factory. (B for SOCC)
4 Destination code
5,6 Numeral figures
Indicates the production day.
7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.




### C. Developer

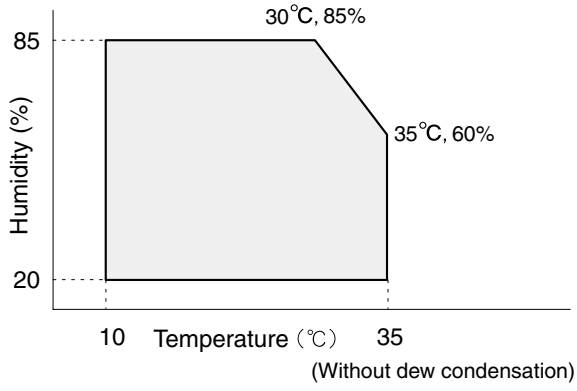
The lot number is composed of 8 digit, and each digit indicates as following.
The lot number shall be printed on the bag.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|

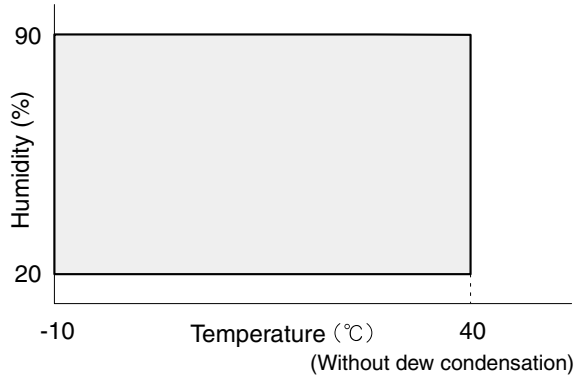
1 Alphabet
Indicates the production factory.
2 Figure
Indicates the production year.
3/4 Figure
Indicates the production month.
5/6 Figure
Indicates the production day.
7 Hyphenation
8 Figure
Indicates the production lot.

## 3. Environmental conditions

### A. Operating conditions




### B. Storage conditions

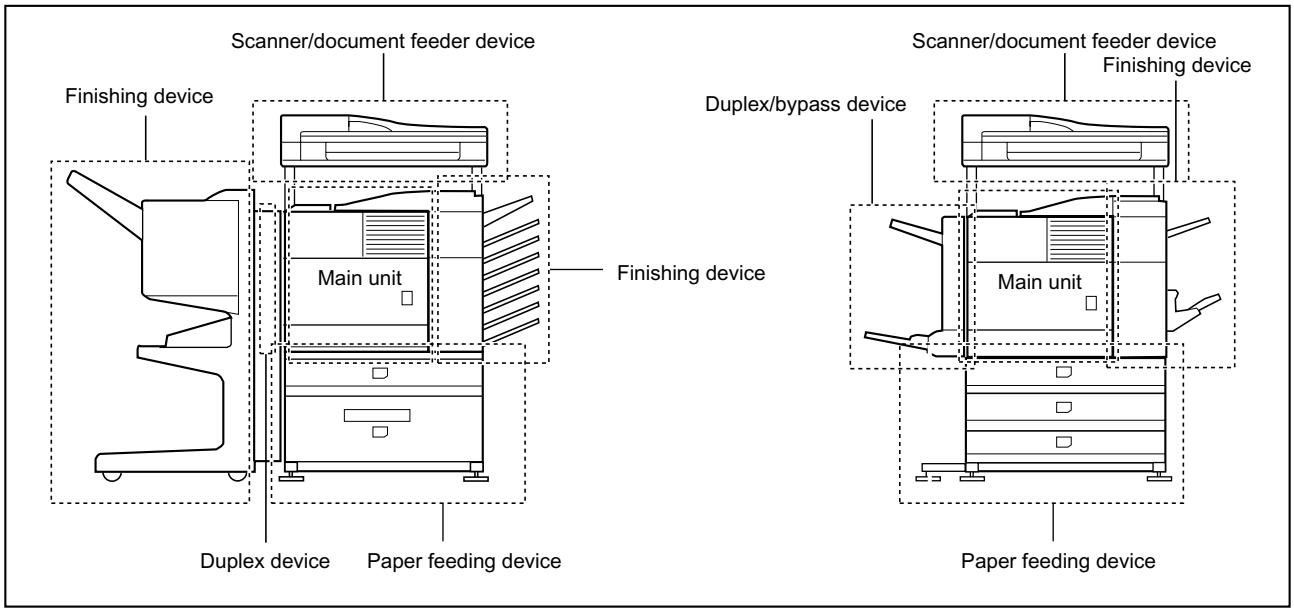


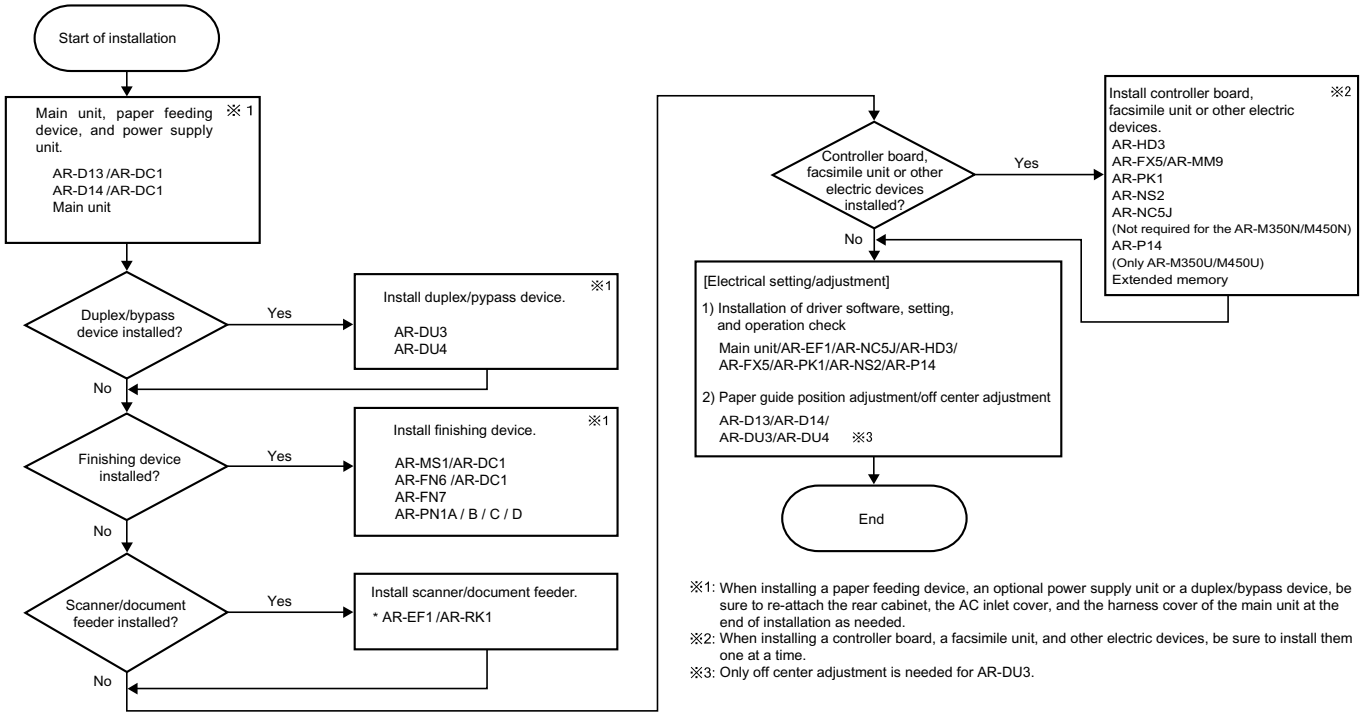
# [6] UNPACKING AND INSTALLATION

## 1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.
Some peripheral devices may have been installed as standard devices depending on the main unit model.
Part of descriptions and illustrations may be different.



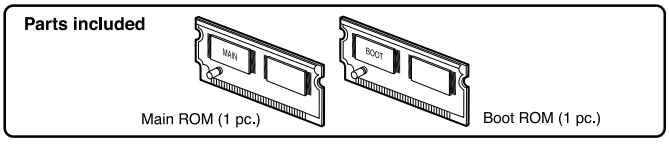

※1: When installing a paper feeding device, an optional power supply unit or a duplex/bypass device, be sure to re-attach the rear cabinet, the AC inlet cover, and the harness cover of the main unit at the end of installation as needed.
※2: When installing a controller board, a facsimile unit, and other electric devices, be sure to install them one at a time.
※3: Only off center adjustment is needed for AR-DU3.

* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

## 2. AR-P14 installing procedure

**<Before installation>**

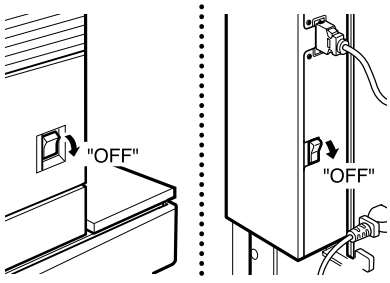
* This installation procedure is provided for use with the AR-M350U/ M450U series.
* To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



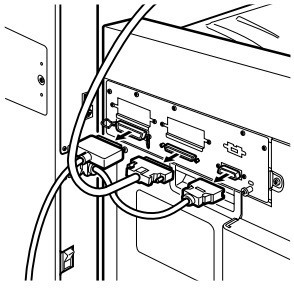

* To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information.
Keep the above information for future reference.

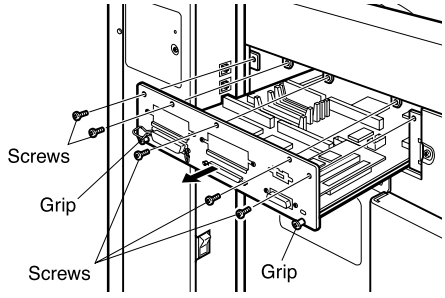
1) Mount the printer expantion kit ROMs to the control PWB.
<1>Turn off the main switch of the main unit of the printer
Turn the main switch located on the front side of the main unit to the "OFF" position.
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.
Then remove the power plug from the outlet.
.



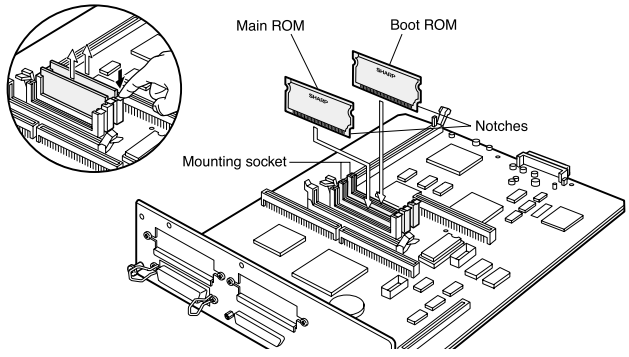

<2>Remove the cables connected to the control PWB unit.
Remove all the cables connected to the control PWB unit of the main unit of the printer.



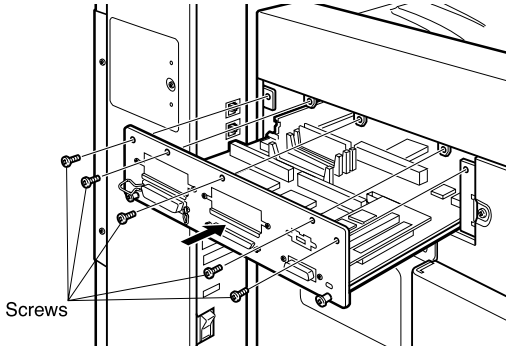
<3>Remove the control PWB unit.
Remove the five screws that fix the control PWB unit to the main unit of the printer.
Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.



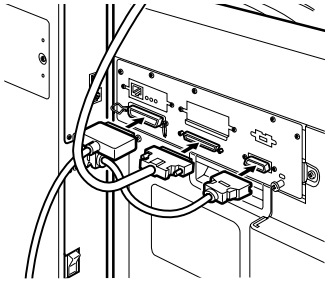

<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.
Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.
When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.




<5>Re-attach the control PWB.
Attach the control PWB to the main unit of the printer and fix it using five screws.

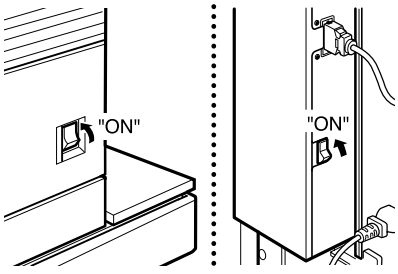


<6>Connect the cables to the control PWB.
Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



**If another peripheral device must be installed, carry out the following steps at the end of the installation work.**

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.




3) Prepare to enable the printer expansion function.
To enable the printer expansion function, use the keys on the operation panel to enter the product key.
For entry of the product key, see the key operator's guide of the operation manual for the main unit.

**Carry out the network setting for the Print Server Card.**
Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

**In addition to the network setting for this machine, to use the machine in the network environment:**
According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.
For installation in the server computer and network setting, see the operation manual supplied with the main unit.
This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.
When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.
(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

# [7] MAINTENANCE

## 1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

## 2. Maintenance System Table

The maintenance system table is the same as that of the AR-M350/M450.

### A. Scanner / DSPF

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

| Unit name | Part name | | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Optical section | Mirror/Lens/Reflector/Sensors | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Table glass/OC | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | White reference glass | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Rails | | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Drive belt/Drive wire/Pulley | | | × | × | × | × | × | × | × | × | |
| DSPF | Paper feed section | Take-up roller | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | | Separation pad | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | | Paper feed roller | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | Transport section | PS roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Exposure section (Dust-proof glass) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Paper exit section | Paper feed roller SPF | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Other | Sensors | | | ○ | | ○ | | ○ | | ○ | For cleaning, blow air. |
| | Finish stamp section [Option] (Japan only) | Stamp solenoid | | | | | | | | | ▲ | |
| | | Stamp individual part | × | × | × | × | × | × | × | × | × | User replacement at 10K or 1 year. |

Note 2: Replacement reference: Same as above or 2 years.

## B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

| Unit name | Part name | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Drum peripheral | Drum | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Installed when shipping |
| | Cleaner blade | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Toner reception seal | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Side molt | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Transfer roller | × | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | Discharge plate | × | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | TR bearing (F/R) | | | × | | × | | × | | ▲ | |
| | Transfer roller collar | | | × | | × | | × | | ▲ | |
| | After-transfer star ring | | | × | | × | | × | | × | |
| | TR gear | × | × | × | × | ▲ | × | × | × | ▲ | |
| | Screen grid | (○)× | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Drum separation pawl UN | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Charger case (M/C) | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Charging plate (saw teeth) | (○)× | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| Developing section | Developer | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | Supplied when installing |
| | DV blade | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | DSD collar | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | DV side seal F | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | DV side seal R | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | Toner cartridge | | | | | | | | | | Attached when installing./ EX Japan: 814g, user replacement for every 27K. |
| Fusing section | Upper heat roller | | ○ | ○ | ○ | ▲ | ○ | ○ | ○ | ▲ | |
| | Lower heat roller | | ○ | ○ | ○ | ▲ | ○ | ○ | ○ | ▲ | |
| | Upper separation pawl | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Lower separation pawl | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Thermistor | | ○ | × | ○ | × | ○ | × | ○ | × | Clean and remove paper dust. |
| | Upper heat roller gear | | × | × | × | ▲ | × | × | × | ▲ | |
| | Paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Gears | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Cleaning roller | | × | × | × | ▲ | × | × | × | ▲ | |
| | CL roller collar | | | | | ▲ | | | | ▲ | |
| Filters | Ozone filter | | | ▲ | | ▲ | | ▲ | | ▲ | |
| Paper feed section | Paper feed roller | ○ | ○ | × | ○ | × | ○ | × | ○ | × | Note 1 |
| | Torque limiter | × | | × | | × | | × | | × | Note 1 |
| Transport section Paper exit reverse section | PS follower roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Transport rollers | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Paper dust remover | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| Drive section | Specified position | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Belts | | | | | | | × | | | |
| Image quality | | × | × | × | × | × | × | × | × | × | |
| Other | Sensors | | | × | | × | | × | | × | |

Note 1:Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Torque limiter section: 80K or 2 years

## C. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

| Option name | Part name | | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADU + Manual feed | Paper feed separation section | Paper feed rollers | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Separation pad | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Torque limiter | (○) × | | × | | × | | × | | × | Note 3 |
| | Transport section | Transport rollers | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| Desk (Multi stage LCC) Multi purpose | Paper feed separation section | Paper feed rollers | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Torque limiter | (○) × | | × | | × | | × | | × | Note 3 |
| | Transport section | Transport roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| Finisher | Transport section | Transport rollers | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | De-curler roller | (○) × | × | ○ | × | ○ | × | ○ | × | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| | Staple un | | | | | | | | | | | Replace UN at 100K staple. |
| | Staple cartridge | | | | | | | | | | | User replacement for every 3000pcs. |
| Mail-bin stacker | Transport section | Transport roller | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| Saddle finisher | Transport section | Transport roller | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| | Staple UN | | | | | | | | | | | Replace UN at 100K staple (including the staple UN and the holder section). |
| | Staple cartridge | | | | | | | | | | | User replacement for every 5000 pcs. |

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

# [8] SIMULATION

For the simulation, the following items have been changed.

## 22-10

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the system configuration (option, internal hardware). |
| Section | |
| Item | Spec |
| Operation/Procedure | The machine composition below is displayed. |

```
SIMULATION 22-10
SYSTEM INFORMATION.
MACHINE: *******
SPF: *******  XXXXXXXXXXX
FINISHER : *******          MAIL BIN : *******          PUNCH : ******
DESK/LCC : *******          ADU: *******  XXXXXXXXXXXX
PROCESS TYPE : *
SYSTEM MEMORY: **MB                 HDD: ***MB  ICU F ******
NIC : *******  NSCN : ******         PS3 : ******
FAX: *******  FAX  MEMORY : **MB     HAND SET: *******
STAMP : *******
```

**<List of display value>**

| | |
|---|---|
| MACHINE | Model codes |
| SPF | NONE/ (Model code) |
| FINISHER | NONE/ (Model code) |
| MAIL BIN | NONE/ (Model code) |
| PUNCH | NONE/ (Model code) |
| DESK/LCC | NONE/ (Model code) |
| ADU | NONE/ (Model code) |
| PROCESS TYPE | Process control spec<br>(1, 2: AR machine  3: DM machine) |
| SYSTEM MEMORY | Memory capacity (MB) |
| HDD | Hard disk capacity (MB) |
| ICU | PRINTER/MFP |
| NIC | NONE/ (Model code) |
| NSCN | NONE/ (Network scanner) |
| PS3 | NONE/ (PS3 expansion kit) |
| FAX | NONE/ (Model code) |
| FAX MEMORY | FAX expansion memory capacity (MB) |
| HAND SET | NONE/ (Model code) |
| STAMP | Finisher stamp NONE/ (Model code) |

**<List of machine model codes>**

| Item | Display | Content |
|---|---|---|
| MACHINE | AR-P350/350LP | |
| | AR-P450/450LP | |
| | AR-M350/350M | (Include the N model) |
| | AR-M450/450M | (Include the N model) |
| | AR-310M | |
| | AR-M350U | |
| | AR-M450U | |
| | AR-310S/310F | |
| | AR-350S/350F | |
| | AR-450S/450F | |
| SPF | - | Document feed unit not installed |
| | AR-EF2 | Document feed unit (SPF) installed |
| | AR-EF1 | Duplex document feed unit installed |
| FINISHER | - | After-work unit not installed |
| | AR-FN6 | Built-in finisher installed |
| | AR-FN7 | Console finisher installed |
| MAIL BIN | - | Mail bin not installed |
| | AR-MS1 | Mail bin installed |
| Punch unit | - | Punch unit not installed |
| | AR-PN1A | Punch unit 2 holes |
| | AR-PN1B | Punch unit 3 holes |
| | AR-PN1C | Punch unit 4 holes |
| | AR-PN1D | Punch unit 4 holes wide hole |
| ADU | - | Duplex module not installed |
| | AR-DU3 | Duplex module installed |
| | AR-DU4 | Duplex module +<br>manual feed unit installed |
| DESK | - | Paper feed desk not installed |
| | AR-MU1 | Multi-purpose tray installed |
| | AR-D14/D15 | Paper feed desk installed |
| | AR-D13 | Tandem desk installed |
| ICU | PRINTER | Printer board |
| | AR-M11 | MFP board |
| | AR-M12 * | MFP board (U model) |
| | AR-M13 * | MFP board (S model) |
| MEMORY | 0MB | No expansion memory |
| | ***MB | Expansion memory ***MB |
| HD | 0MB | Hard disk not installed |
| | ****MB | Hard disk installed (AR-HD3) |
| NIC | - | NIC not installed |
| | AR-NC5J | NIC installed |
| PS3 expansion kit | - | PS3 expansion kit not installed |
| | AR-PK1 | PS3 expansion kit installed |
| FAX | - | FAX expansion kit installed |
| | AR-FX5 | FAX expansion kit not installed |
| Network scanner | - | Network expansion kit not installed |
| | AR-NS2F | Network expansion kit installed |
| Expansion memory | - | Expansion memory for FAX not installed |
| | AR-MM9 | Expansion memory for FAX 8MB (AR-MM9) installed |
| Handset | - | handset not installed |
| | AR-HN5 | Handset installed |
| Finish stamp | - | Finish stamp unit not installed |
| | AR-SU1 | Finish stamp unit installed |

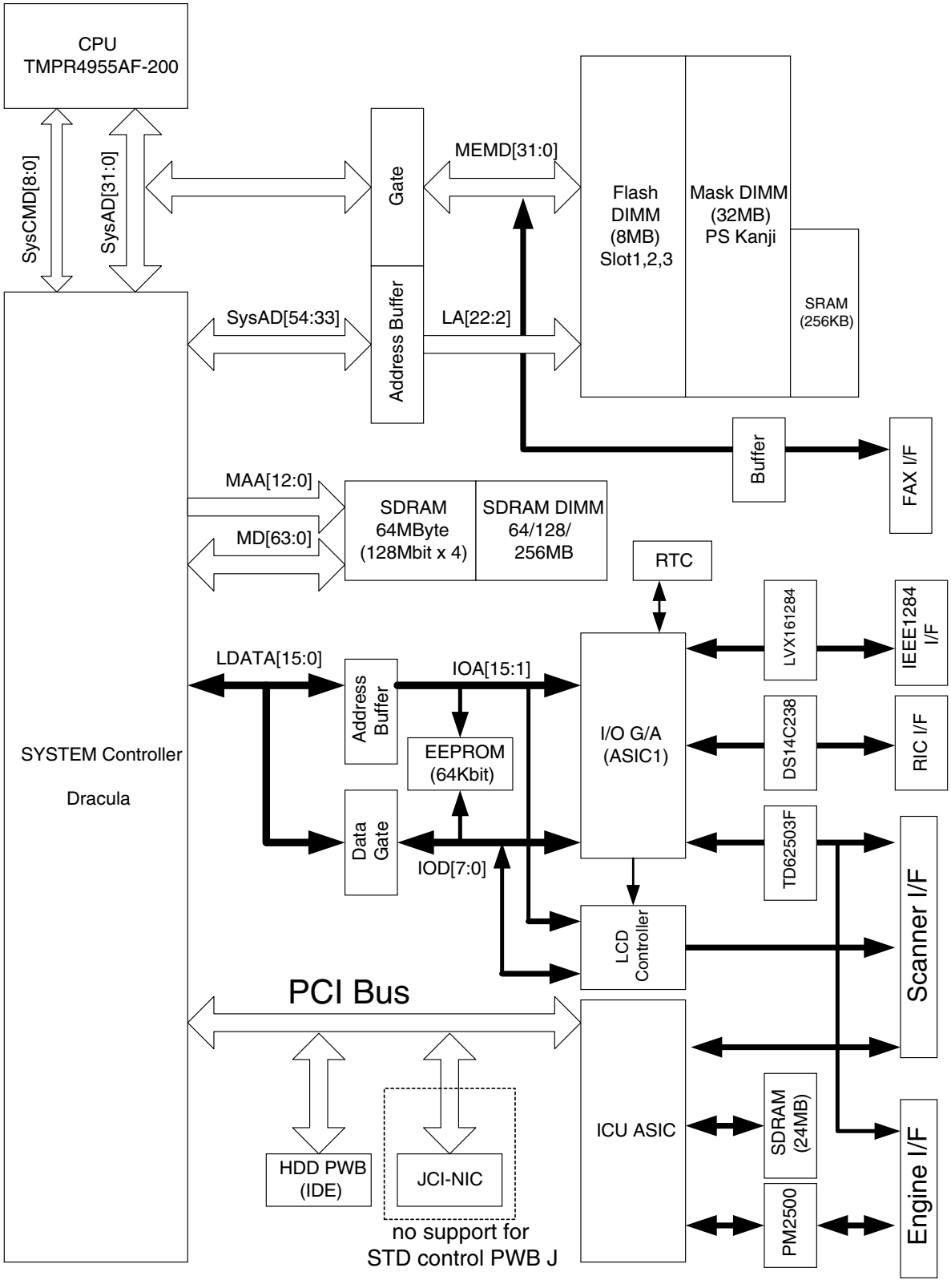
*: Not registered as a product.

# [9] CIRCUIT DIAGRAM

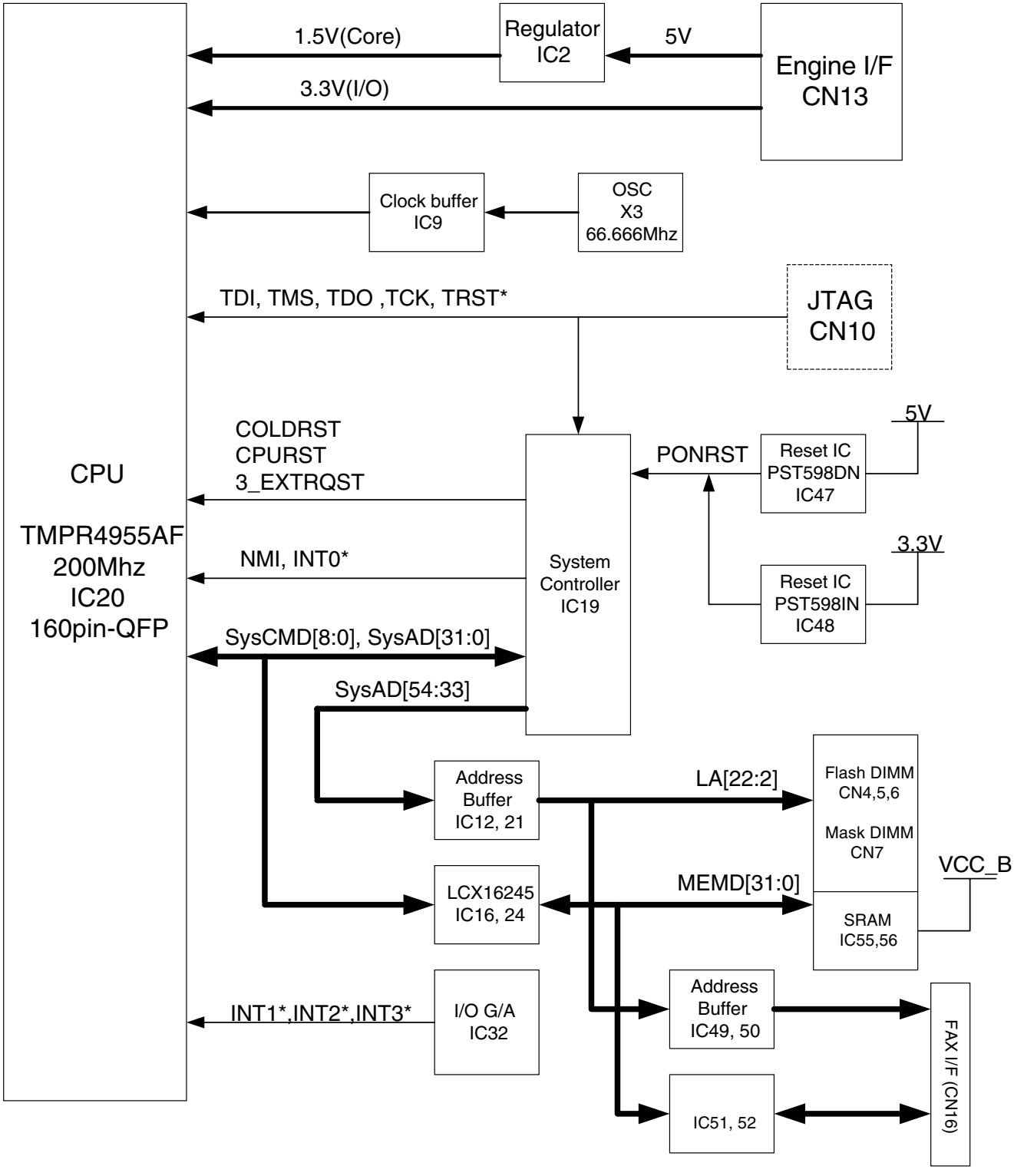
## 1. MFP Control PWB(for AR-M350U/M450U)

### A.Block Diagrams

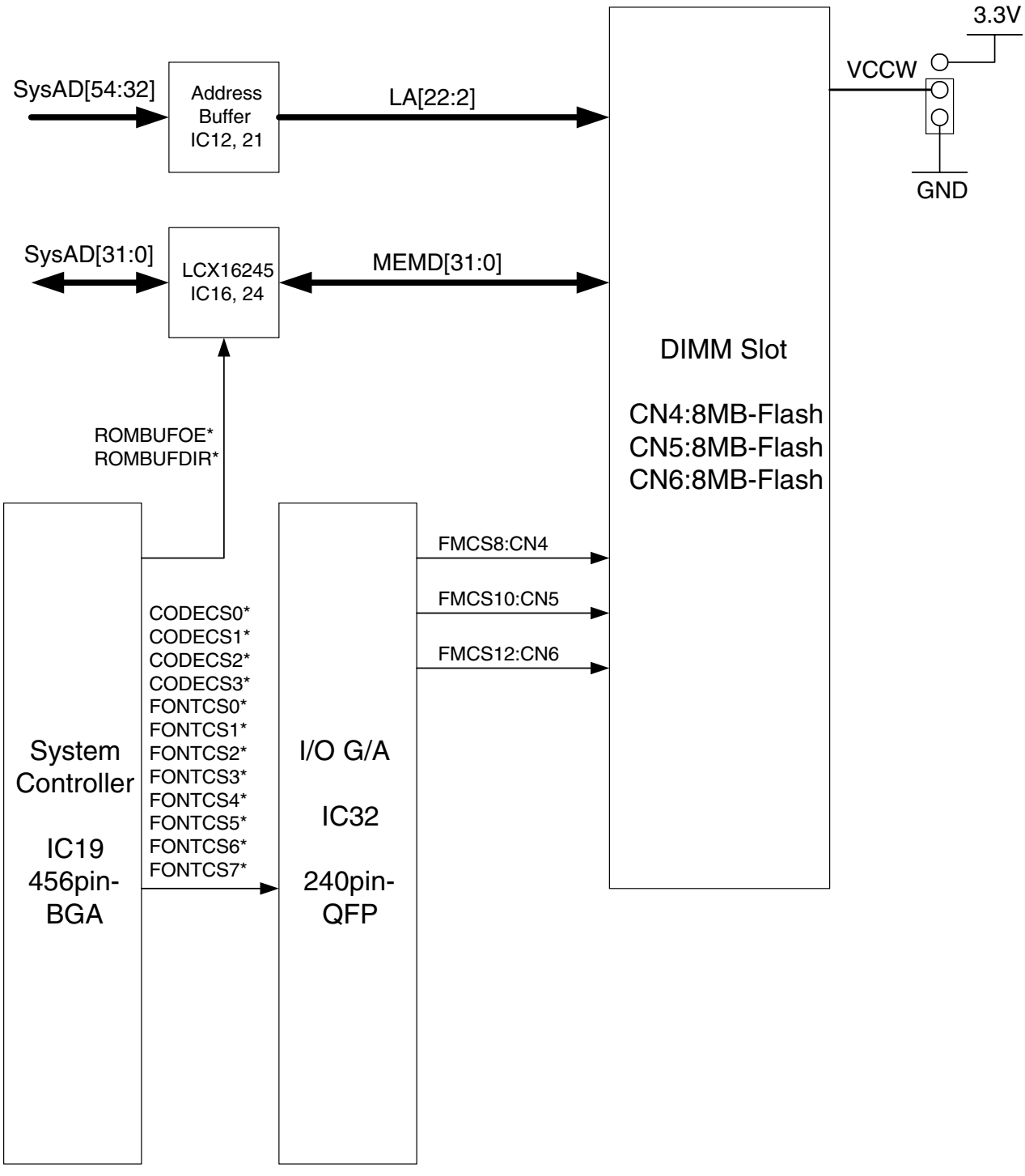
General



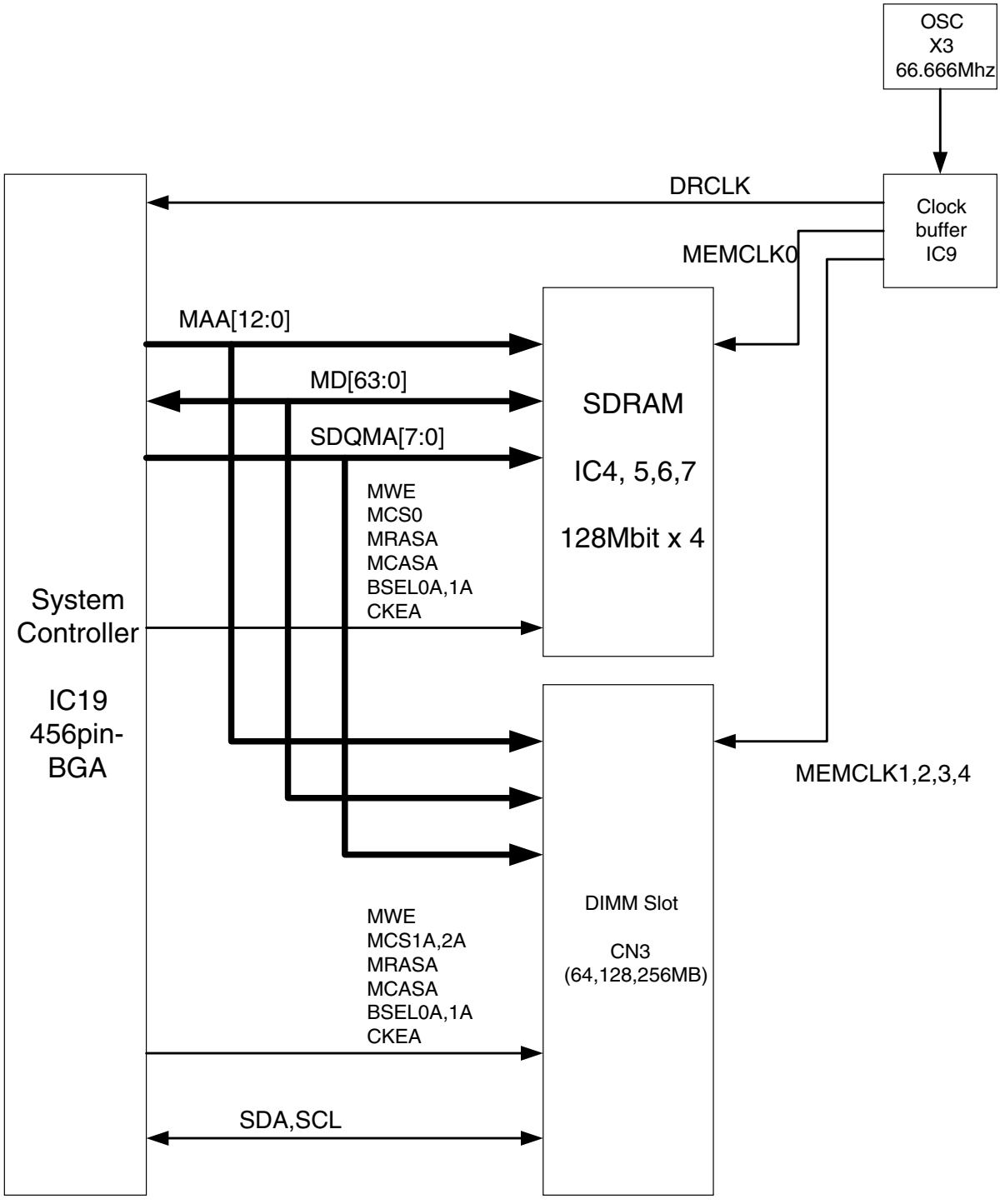
CPU Block


CPU
TMPR4955AF
200Mhz
IC20
160pin-QFP
1.5V(Core)
3.3V(I/O)
Regulator
IC2
5V
Engine I/F
CN13
Clock buffer
IC9
OSC
X3
66.666Mhz
TDI, TMS, TDO ,TCK, TRST*
JTAG
CN10
COLDRST
CPURST
3_EXTRQST
NMI, INT0*
SysCMD[8:0], SysAD[31:0]
SysAD[54:33]
System
Controller
IC19
PONRST
Reset IC
PST598DN
IC47
5V
Reset IC
PST598IN
IC48
3.3V
Address
Buffer
IC12, 21
LA[22:2]
Flash DIMM
CN4,5,6
Mask DIMM
CN7
LCX16245
IC16, 24
MEMD[31:0]
SRAM
IC55,56
VCC_B
INT1*,INT2*,INT3*
I/O G/A
IC32
Address
Buffer
IC49, 50
IC51, 52
FAX I/F (CN16)

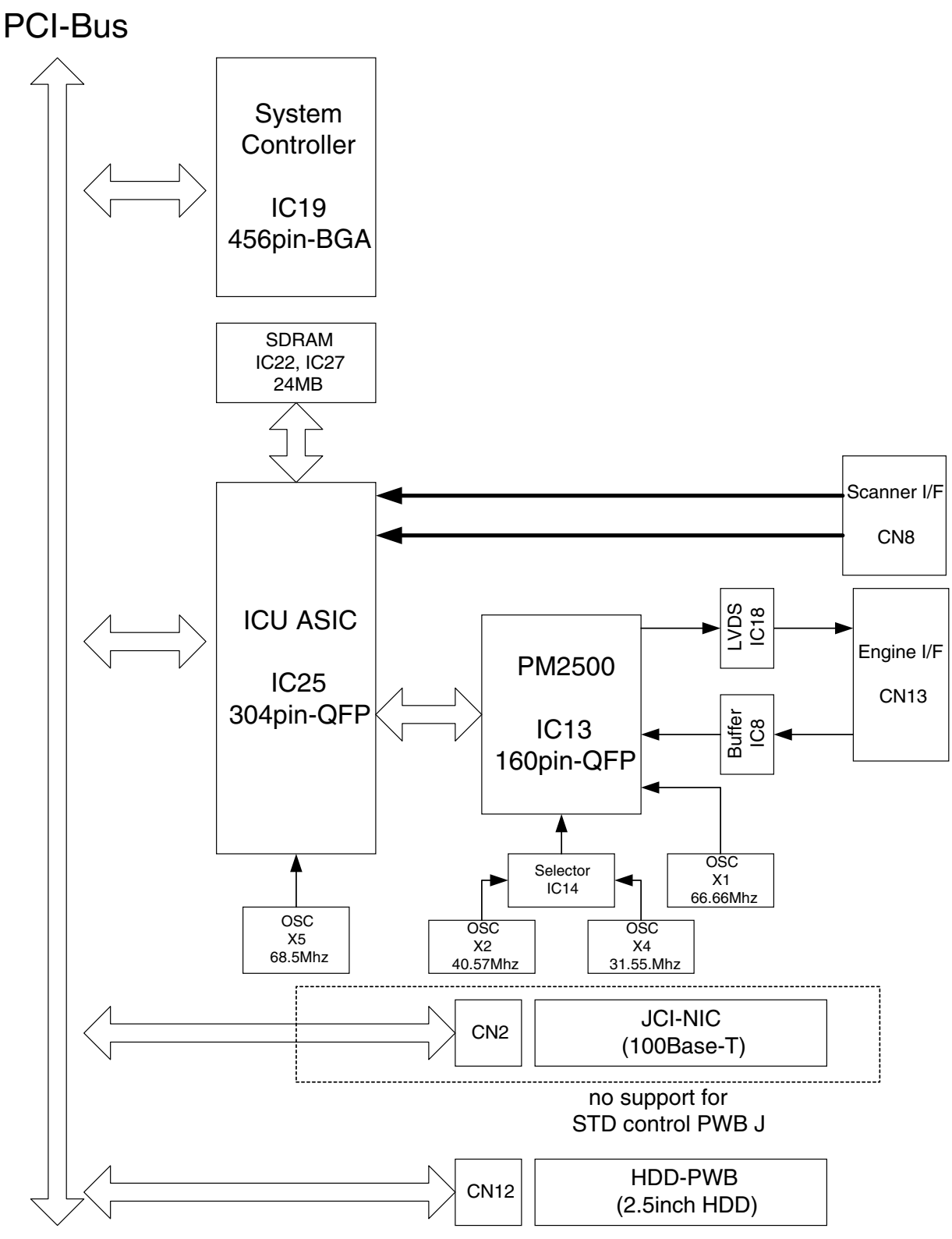
ROM Block ( Flash & Mask )



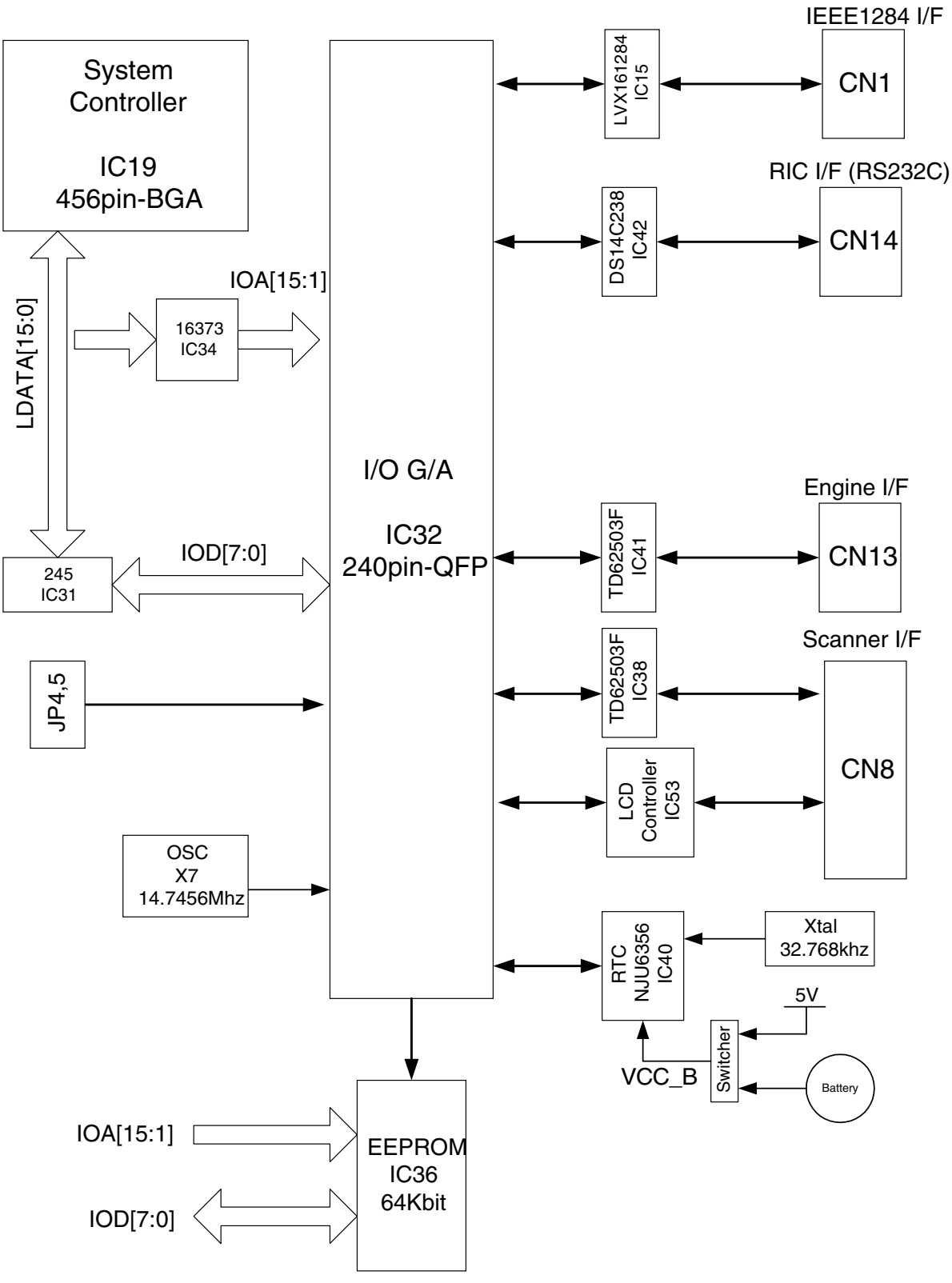
SDRAM Block ( Standard & Option )



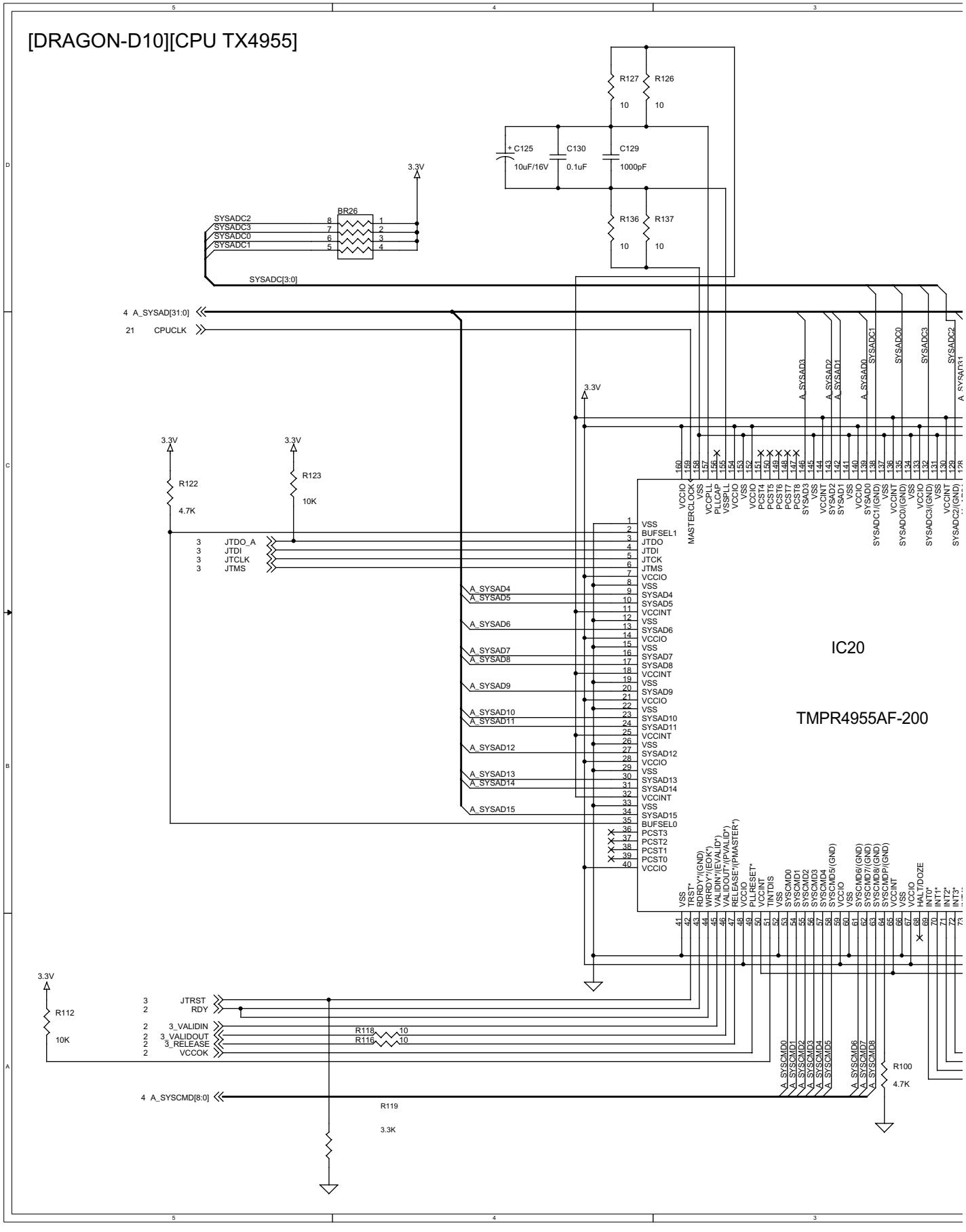
PCI Block ( ICU & Option )

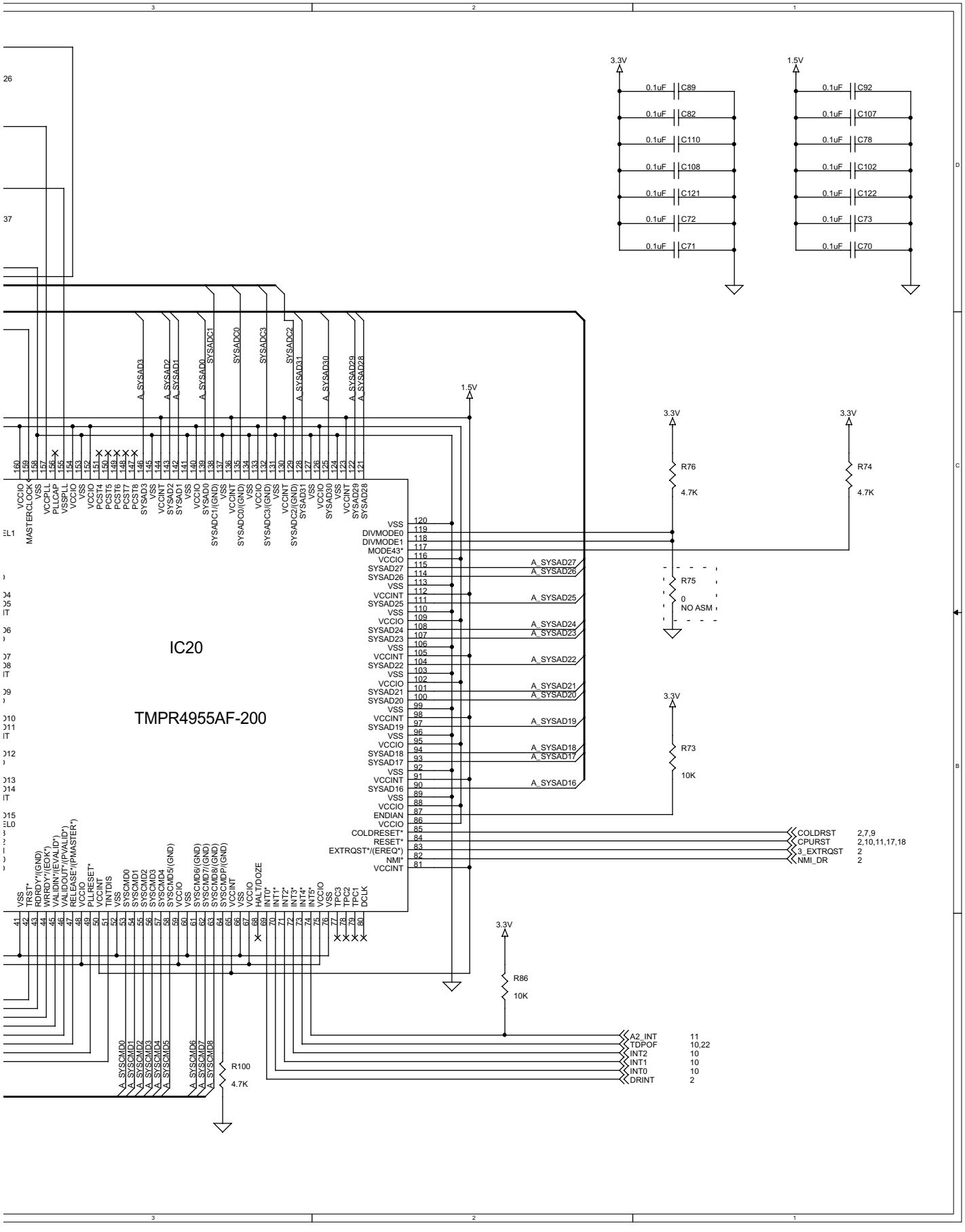


I/O Block ( EEPROM & Misc I/O )

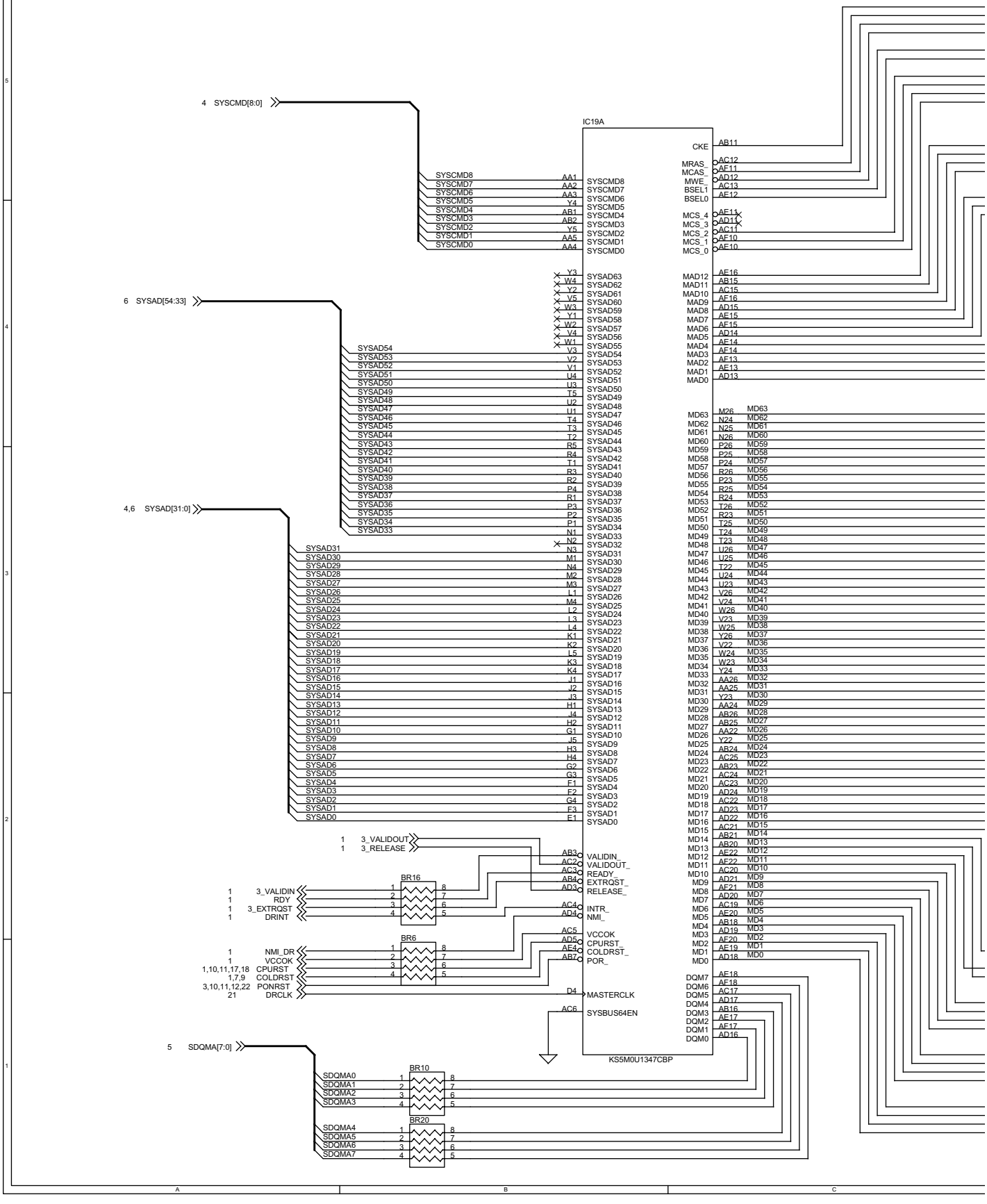


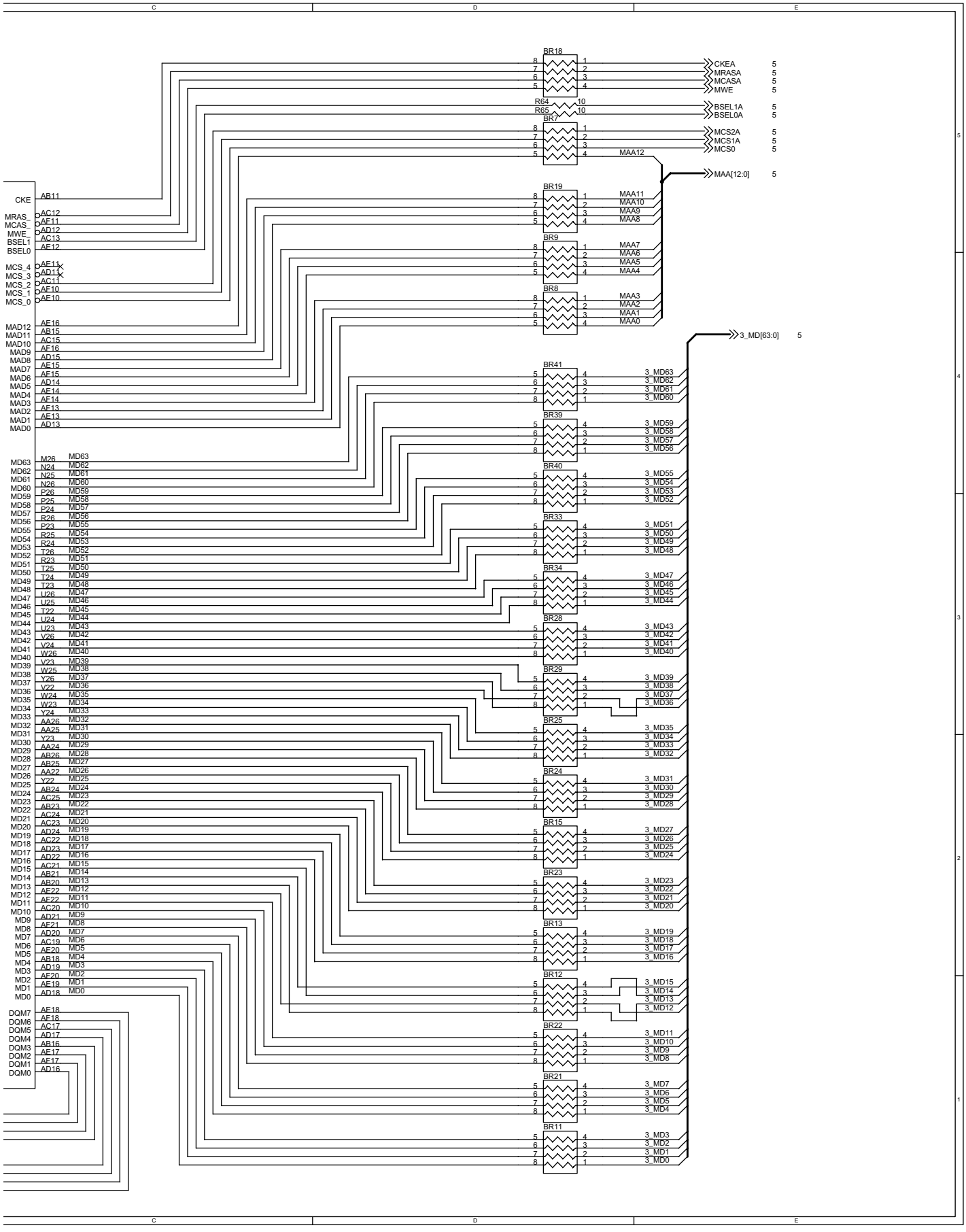
## B. Circuit Diagram



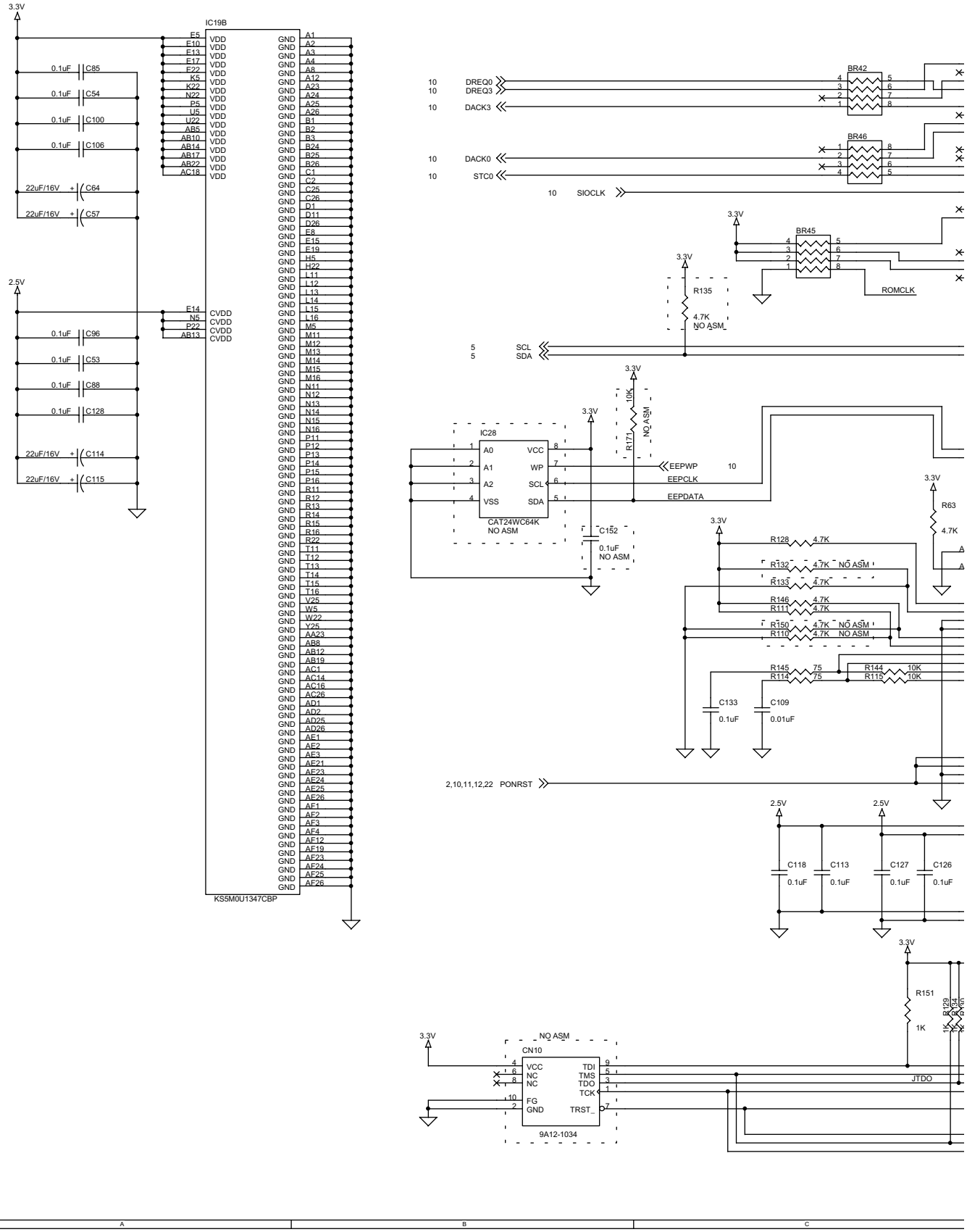

IC20
TMPR4955AF-200
3.3V
1.5V
0.1uF C89
0.1uF C82
0.1uF C110
0.1uF C108
0.1uF C121
0.1uF C72
0.1uF C71
0.1uF C92
0.1uF C107
0.1uF C78
0.1uF C102
0.1uF C122
0.1uF C73
0.1uF C70
R76 4.7K
R74 4.7K
R75 0 NO ASM
R73 10K
R86 10K
R100 4.7K
A_SYSAD27
A_SYSAD26
A_SYSAD25
A_SYSAD24
A_SYSAD23
A_SYSAD22
A_SYSAD21
A_SYSAD20
A_SYSAD19
A_SYSAD18
A_SYSAD17
A_SYSAD16
COLDRST 2,7,9
CPURST 2,10,11,17,18
3_EXTRQST 2
NMI_DR 2
A2_INT 11
TDPOF 10,22
INT2 10
INT1 10
INT0 10
DRINT 2

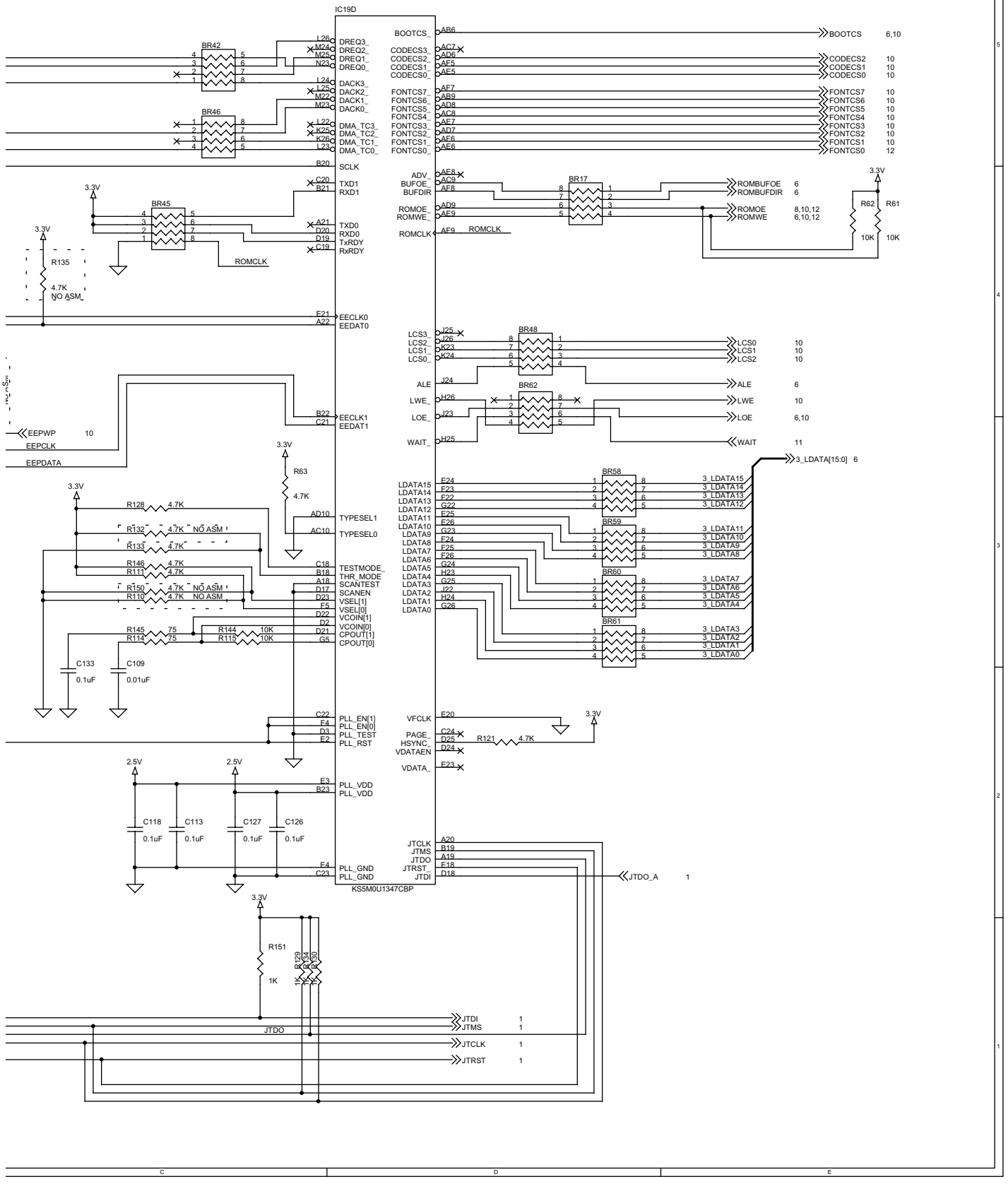
# [Print Controller (for AR-M350U / M450U) (1/3)]



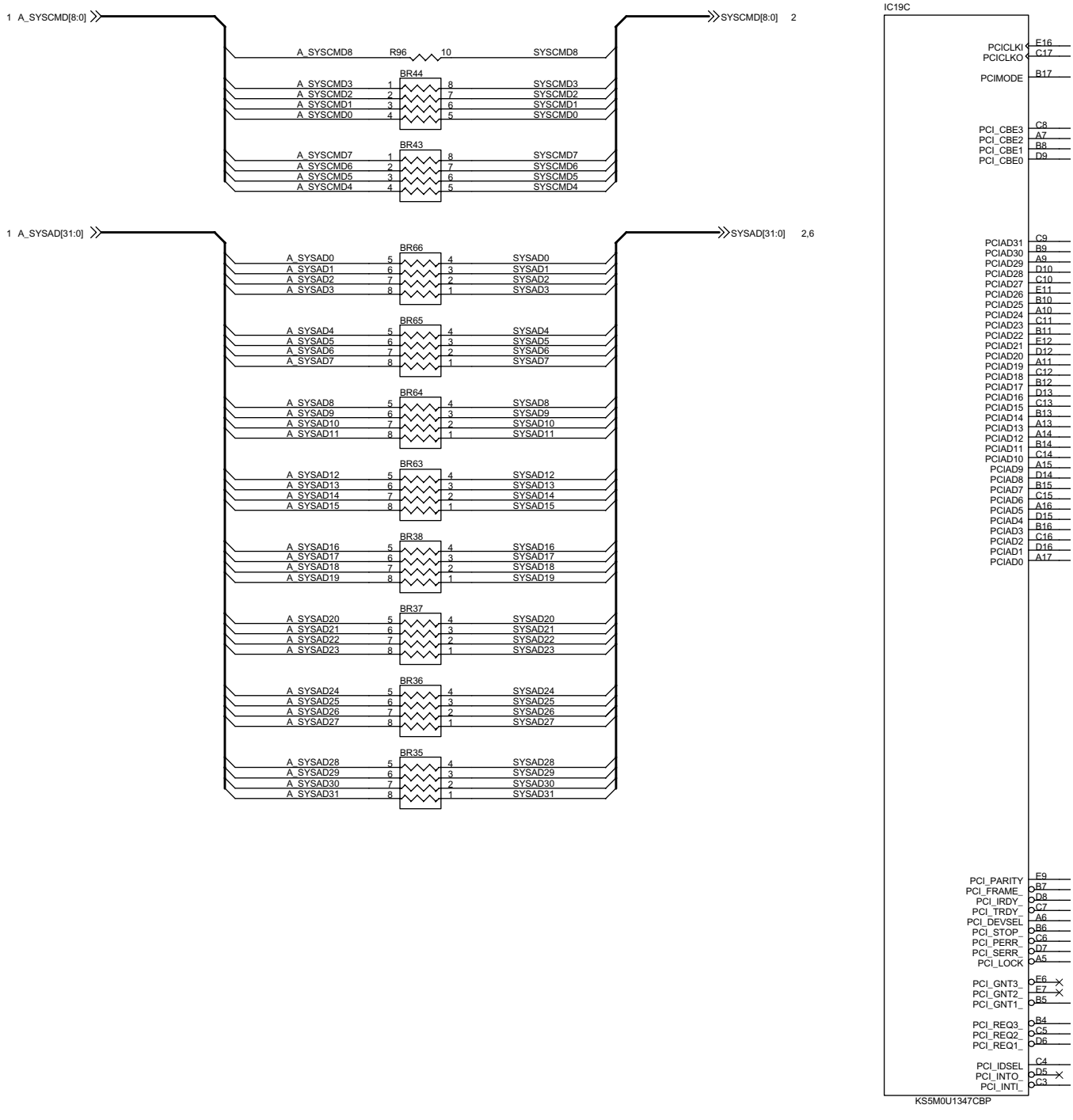

BR18
CKEA 5
MRASA 5
MCASA 5
MWE 5
R64 10
R65 10
BSEL1A 5
BSEL0A 5
BR7
MCS2A 5
MCS1A 5
MCS0 5
MAA12
MAA[12:0] 5
BR19
MAA11
MAA10
MAA9
MAA8
BR9
MAA7
MAA6
MAA5
MAA4
BR8
MAA3
MAA2
MAA1
MAA0
3_MD[63:0] 5
BR41
3_MD63
3_MD62
3_MD61
3_MD60
BR39
3_MD59
3_MD58
3_MD57
3_MD56
BR40
3_MD55
3_MD54
3_MD53
3_MD52
BR33
3_MD51
3_MD50
3_MD49
3_MD48
BR34
3_MD47
3_MD46
3_MD45
3_MD44
BR28
3_MD43
3_MD42
3_MD41
3_MD40
BR29
3_MD39
3_MD38
3_MD37
3_MD36
BR25
3_MD35
3_MD34
3_MD33
3_MD32
BR24
3_MD31
3_MD30
3_MD29
3_MD28
BR15
3_MD27
3_MD26
3_MD25
3_MD24
BR23
3_MD23
3_MD22
3_MD21
3_MD20
BR13
3_MD19
3_MD18
3_MD17
3_MD16
BR12
3_MD15
3_MD14
3_MD13
3_MD12
BR22
3_MD11
3_MD10
3_MD9
3_MD8
BR21
3_MD7
3_MD6
3_MD5
3_MD4
BR11
3_MD3
3_MD2
3_MD1
3_MD0
CKE
MRAS_
MCAS_
MWE_
BSEL1
BSEL0
MCS_4
MCS_3
MCS_2
MCS_1
MCS_0
MAD12
MAD11
MAD10
MAD9
MAD8
MAD7
MAD6
MAD5
MAD4
MAD3
MAD2
MAD1
MAD0
MD63
MD62
MD61
MD60
MD59
MD58
MD57
MD56
MD55
MD54
MD53
MD52
MD51
MD50
MD49
MD48
MD47
MD46
MD45
MD44
MD43
MD42
MD41
MD40
MD39
MD38
MD37
MD36
MD35
MD34
MD33
MD32
MD31
MD30
MD29
MD28
MD27
MD26
MD25
MD24
MD23
MD22
MD21
MD20
MD19
MD18
MD17
MD16
MD15
MD14
MD13
MD12
MD11
MD10
MD9
MD8
MD7
MD6
MD5
MD4
MD3
MD2
MD1
MD0
DQM7
DQM6
DQM5
DQM4
DQM3
DQM2
DQM1
DQM0

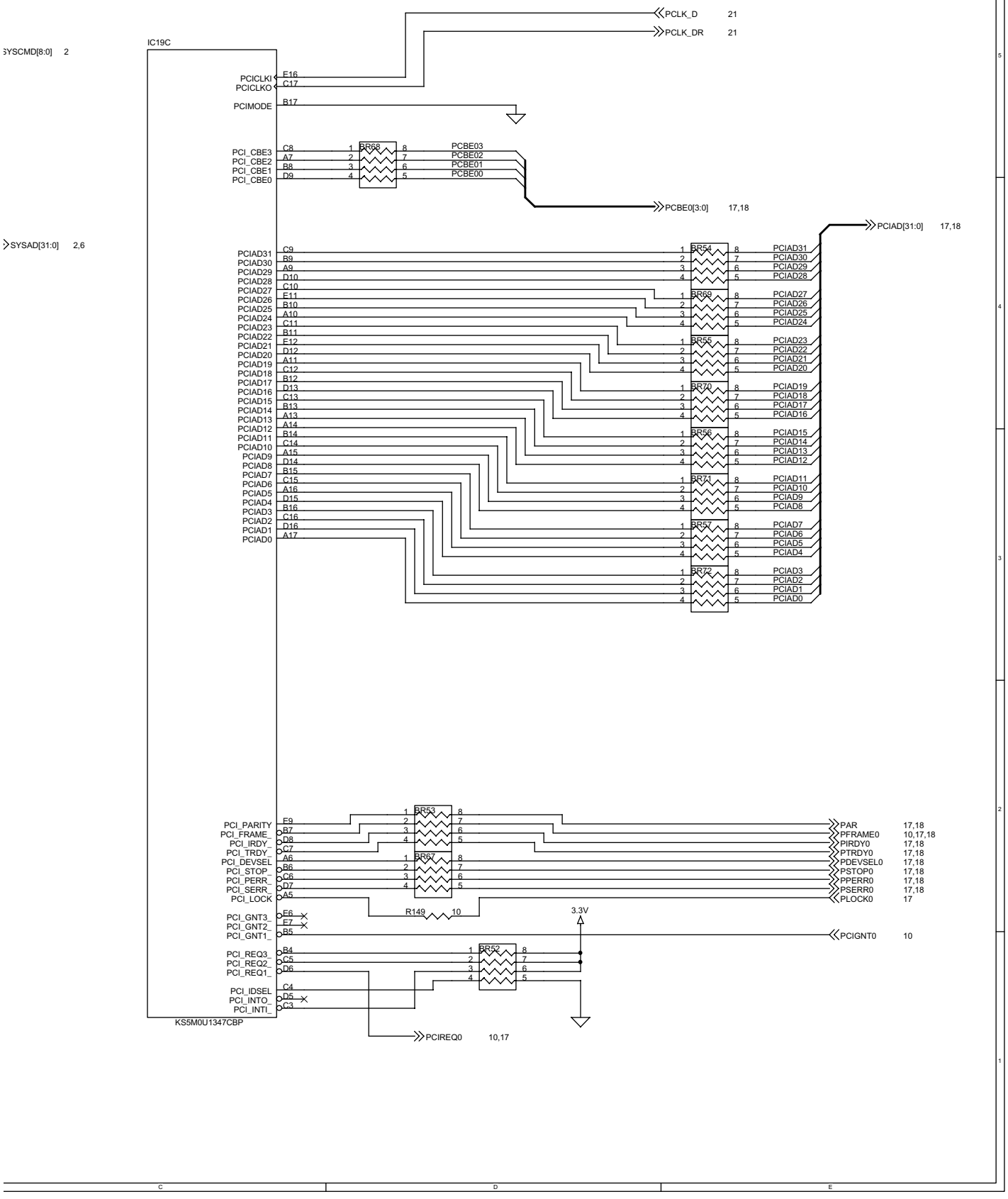
# [Print Controller (for AR-M350U / M450U) (2/3)]



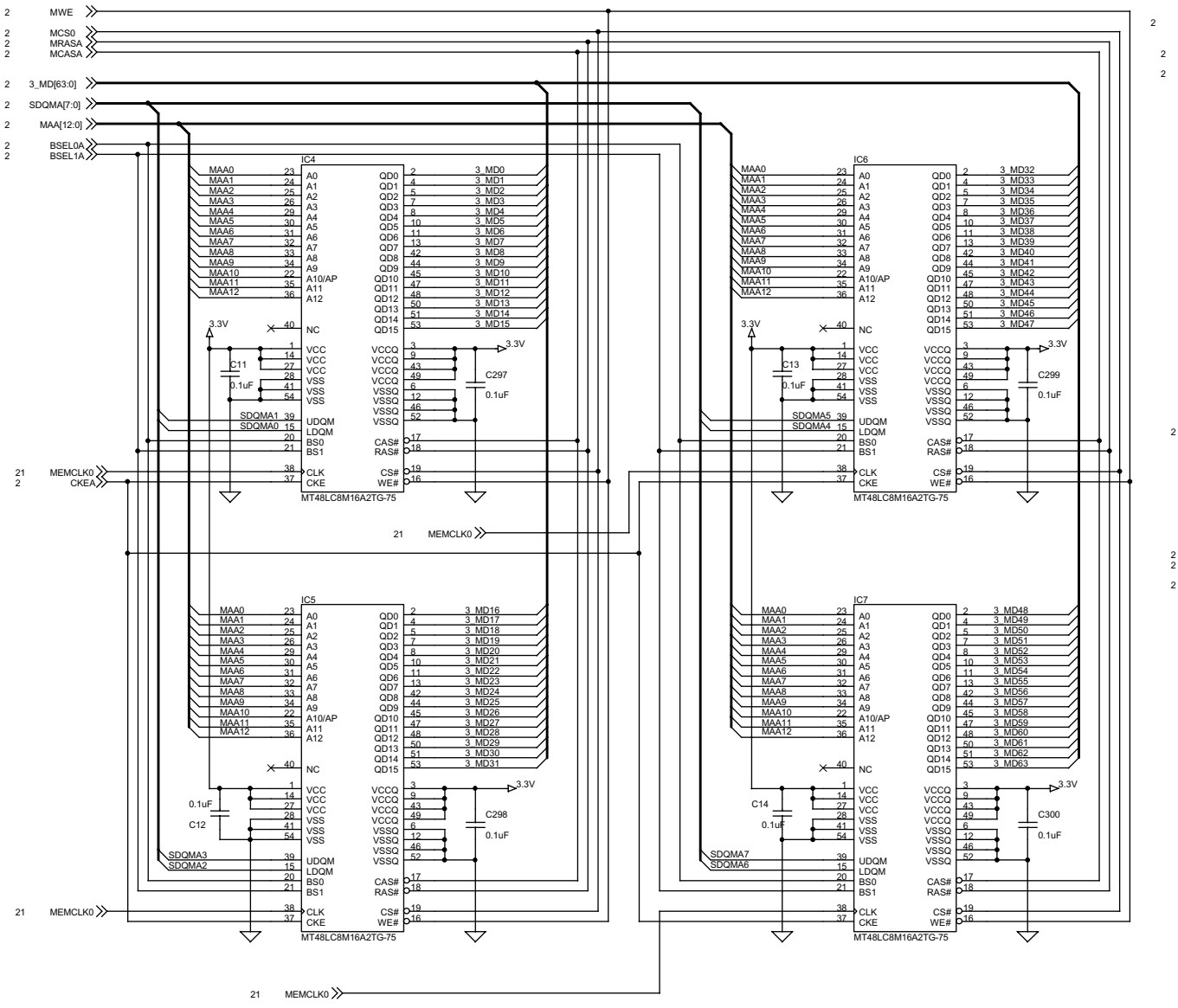

IC19D
KS5M0U1347CBP
BOOTCS_
CODECS3_
CODECS2_
CODECS1_
CODECS0_
FONTCS7_
FONTCS6_
FONTCS5_
FONTCS4_
FONTCS3_
FONTCS2_
FONTCS1_
FONTCS0_
DREQ3_
DREQ2_
DREQ1_
DREQ0_
DACK3_
DACK2_
DACK1_
DACK0_
DMA_TC3_
DMA_TC2_
DMA_TC1_
DMA_TC0_
SCLK
TXD1
RXD1
TXD0
RXD0
TxRDY
RxRDY
EECLK0
EEDAT0
EECLK1
EEDAT1
TYPESEL1
TYPESEL0
TESTMODE_
THR_MODE
SCANTEST
SCANEN
VSEL[1]
VSEL[0]
VCOIN[1]
VCOIN[0]
CPOUT[1]
CPOUT[0]
PLL_EN[1]
PLL_EN[0]
PLL_TEST
PLL_RST
PLL_VDD
PLL_VDD
PLL_GND
PLL_GND
ADV_
BUFOE_
BUFDIR
ROMOE_
ROMWE_
ROMCLK
LCS3_
LCS2_
LCS1_
LCS0_
ALE
LWE_
LOE_
WAIT_
LDATA15
LDATA14
LDATA13
LDATA12
LDATA11
LDATA10
LDATA9
LDATA8
LDATA7
LDATA6
LDATA5
LDATA4
LDATA3
LDATA2
LDATA1
LDATA0
VFCLK
PAGE_
HSYNC_
VDATAEN
VDATA_
JTCLK
JTMS
JTDO
JTRST_
JTDI
BR42
BR46
BR45
BR17
BR48
BR62
BR58
BR59
BR60
BR61
R135
4.7K
NO ASM
R63
R128
R132
R133
R146
R111
R150
R110
R145
R114
R144
R115
10K
R121
C133
0.1uF
C109
0.01uF
C118
C113
C127
C126
R151
1K
R129
R124
R130
R62
R61
2.5V
3.3V
ROMCLK
EEPWP
EEPCLK
EEPDATA
BOOTCS
CODECS2
CODECS1
CODECS0
FONTCS7
FONTCS6
FONTCS5
FONTCS4
FONTCS3
FONTCS2
FONTCS1
FONTCS0
ROMBUFOE
ROMBUFDIR
ROMOE
ROMWE
LCS0
LCS1
LCS2
ALE
LWE
LOE
WAIT
3_LDATA[15:0]
JTDO_A
JTDI
JTMS
JTCLK
JTRST

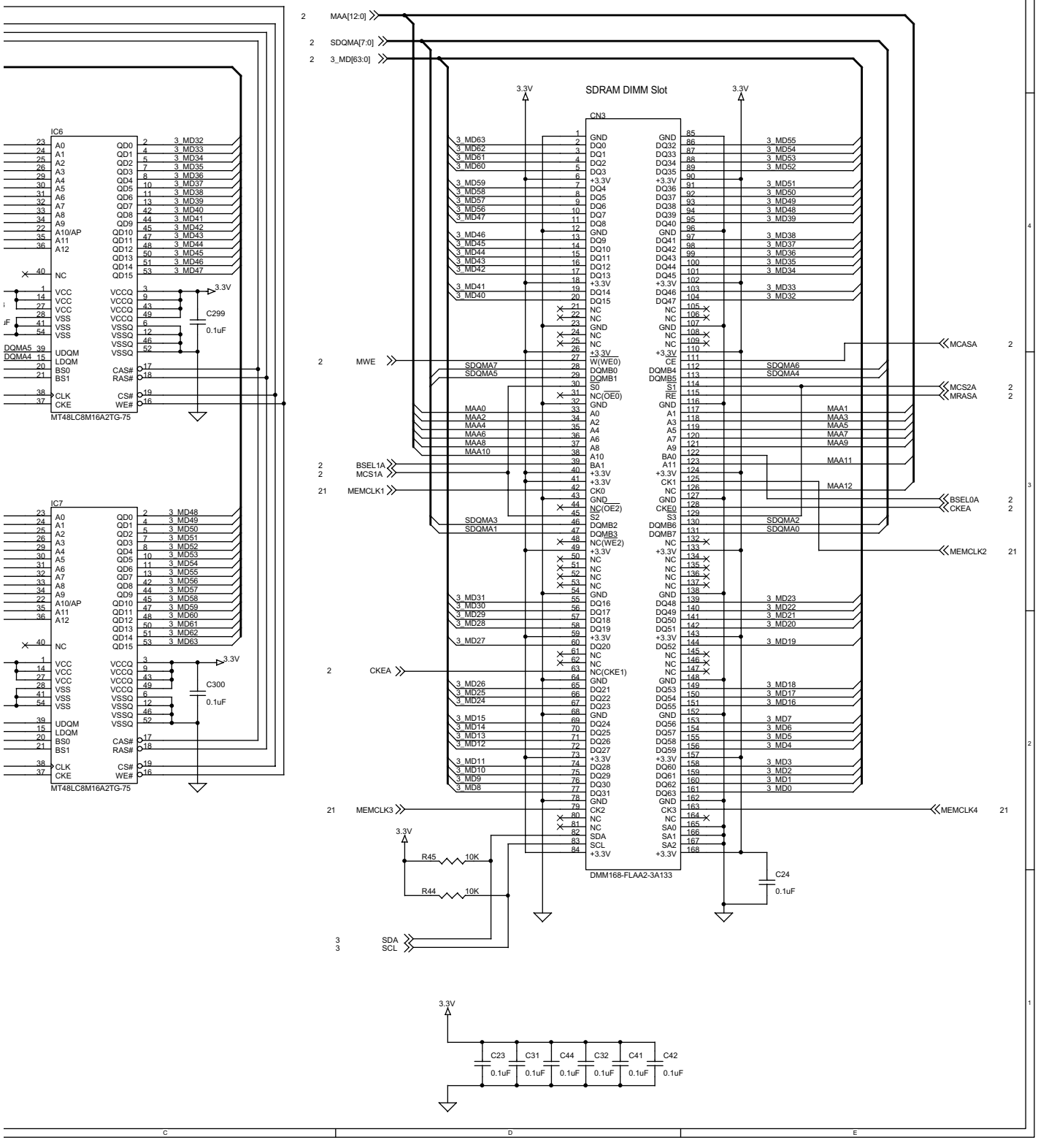
# [Print Controller (for AR-M350U / M450U) (3/3)]



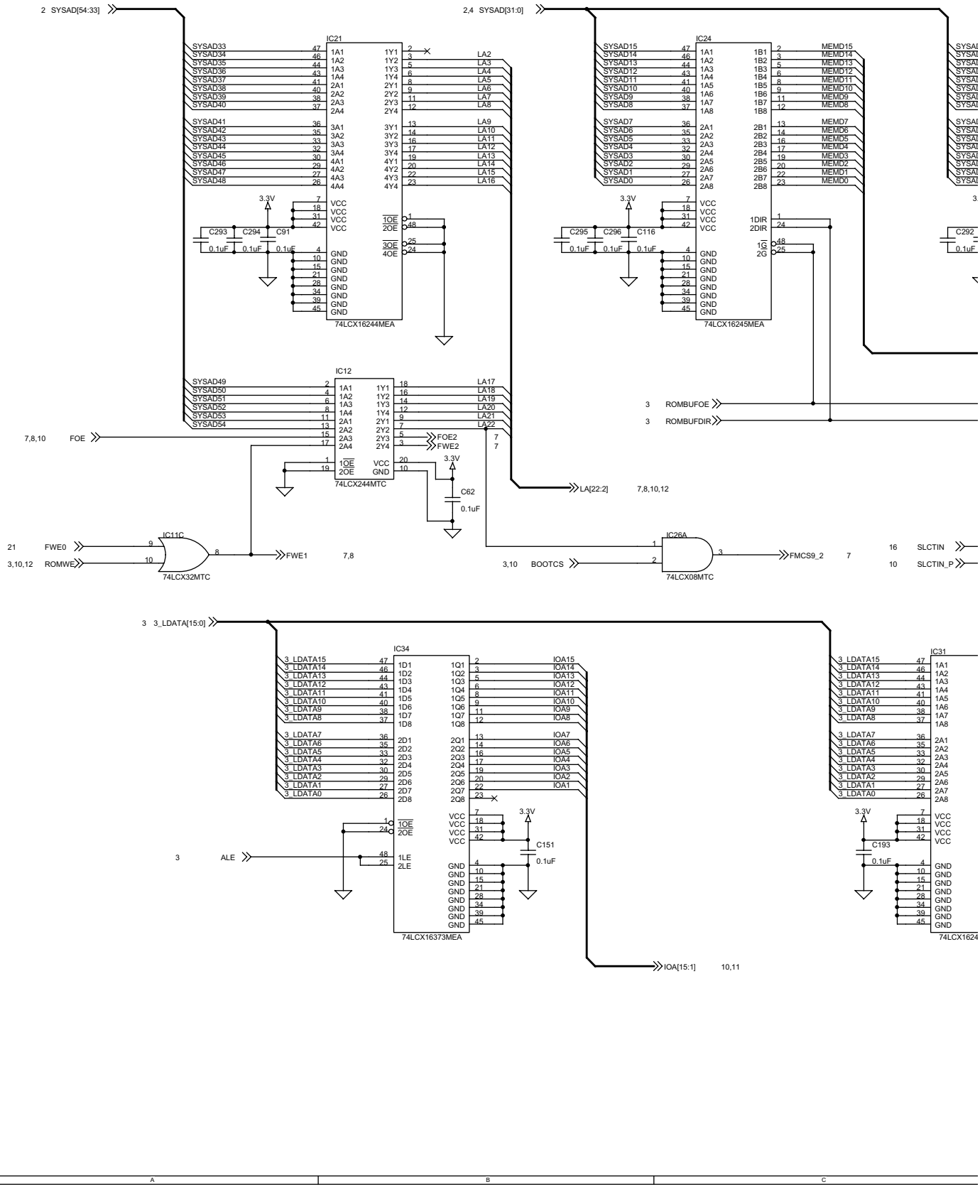

IC19C
SYSCMD[8:0] 2
SYSAD[31:0] 2,6
PCLK_D 21
PCLK_DR 21
PCICLKI E16
PCICLKO C17
PCIMODE B17
PCI_CBE3 C8
PCI_CBE2 A7
PCI_CBE1 B8
PCI_CBE0 D9
BR68
PCBE03
PCBE02
PCBE01
PCBE00
PCBE0[3:0] 17,18
PCIAD[31:0] 17,18
PCIAD31 C9
PCIAD30 B9
PCIAD29 A9
PCIAD28 D10
PCIAD27 C10
PCIAD26 E11
PCIAD25 B10
PCIAD24 A10
PCIAD23 C11
PCIAD22 B11
PCIAD21 E12
PCIAD20 D12
PCIAD19 A11
PCIAD18 C12
PCIAD17 B12
PCIAD16 D13
PCIAD15 C13
PCIAD14 B13
PCIAD13 A13
PCIAD12 A14
PCIAD11 B14
PCIAD10 C14
PCIAD9 A15
PCIAD8 D14
PCIAD7 B15
PCIAD6 C15
PCIAD5 A16
PCIAD4 D15
PCIAD3 B16
PCIAD2 C16
PCIAD1 D16
PCIAD0 A17
BR54
BR69
BR55
BR70
BR56
BR71
BR57
BR72
PCI_PARITY E9
PCI_FRAME_ B7
PCI_IRDY_ D8
PCI_TRDY_ C7
PCI_DEVSEL_ A6
PCI_STOP_ B6
PCI_PERR_ C6
PCI_SERR_ D7
PCI_LOCK A5
BR53
BR67
PAR 17,18
PFRAME0 10,17,18
PIRDY0 17,18
PTRDY0 17,18
PDEVSEL0 17,18
PSTOP0 17,18
PPERR0 17,18
PSERR0 17,18
PLOCK0 17
R149 10
3.3V
PCI_GNT3_ E6
PCI_GNT2_ E7
PCI_GNT1_ B5
PCIGNT0 10
PCI_REQ3_ B4
PCI_REQ2_ C5
PCI_REQ1_ D6
BR52
PCI_IDSEL C4
PCI_INTO_ D5
PCI_INTI_ C3
PCIREQ0 10,17
KS5M0U1347CBP

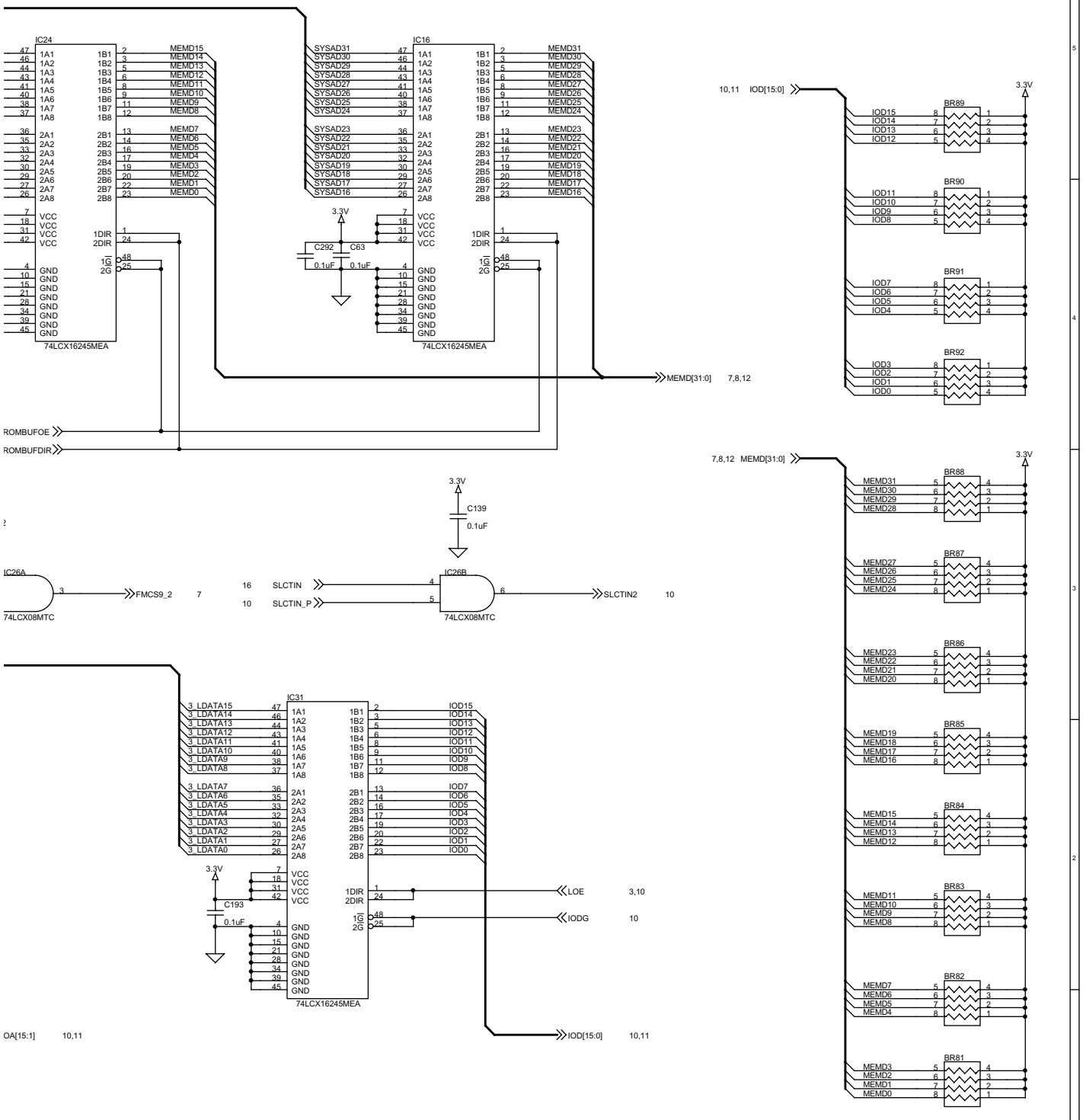
# [SDRAM]


MWE
MCS0
MRASA
MCASA
3_MD[63:0]
SDQMA[7:0]
MAA[12:0]
BSEL0A
BSEL1A
MEMCLK0
CKEA
IC4
IC5
IC6
IC7
MT48LC8M16A2TG-75
3.3V
C11
C12
C13
C14
C297
C298
C299
C300
0.1uF
SDQMA1
SDQMA0
SDQMA3
SDQMA2
SDQMA5
SDQMA4
SDQMA7
SDQMA6

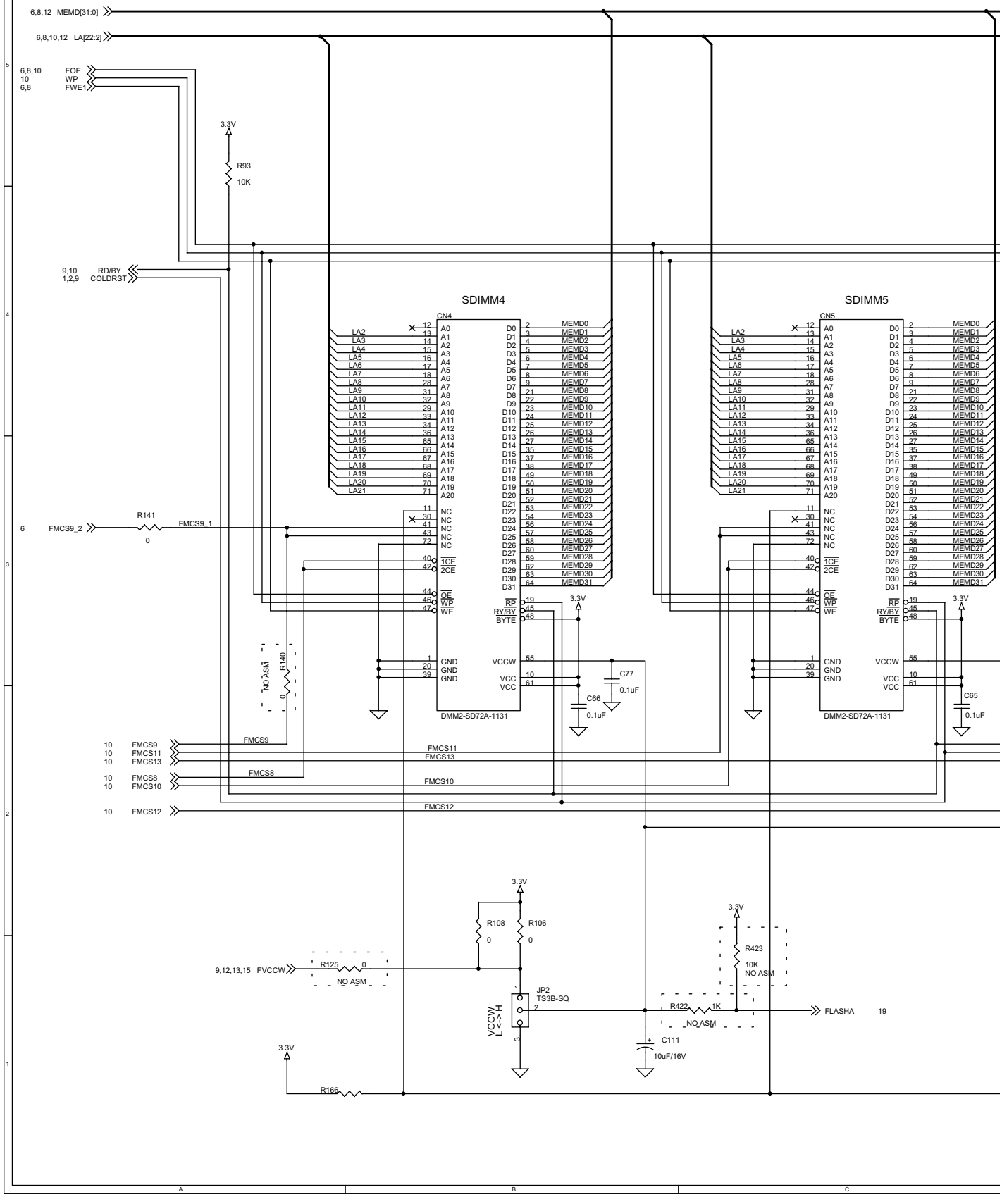

SDRAM DIMM Slot
MAA[12:0]
SDQMA[7:0]
3_MD[63:0]
MWE
BSEL1A
MCS1A
MEMCLK1
CKEA
MEMCLK3
MEMCLK4
MCASA
MCS2A
MRASA
BSEL0A
CKEA
MEMCLK2
SDA
SCL
3.3V
CN3
DMM168-FLAA2-3A133
IC6
IC7
MT48LC8M16A2TG-75
C299
C300
C24
C23
C31
C44
C32
C41
C42
0.1uF
R45
R44
10K

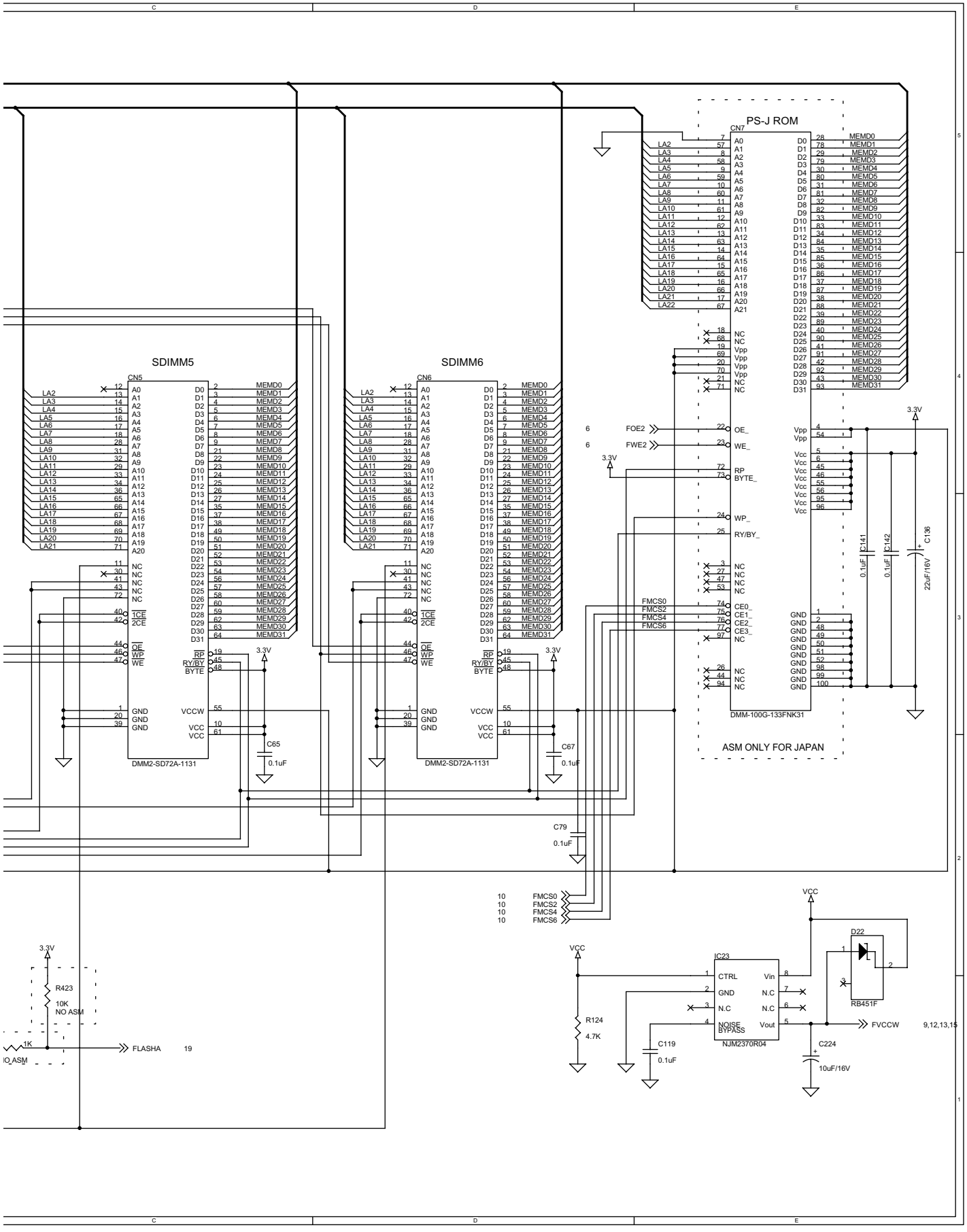
# [BUFFER]


2 SYSAD[54:33]
2,4 SYSAD[31:0]
IC21
74LCX16244MEA
IC24
74LCX16245MEA
IC12
74LCX244MTC
3.3V
C293
C294
C91
C295
C296
C116
C62
0.1uF
ROMBUFOE
ROMBUFDIR
LA[22:2]
7,8,10,12
7,8,10 FOE
FOE2
FWE2
IC11C
74LCX32MTC
21 FWE0
3,10,12 ROMWE
FWE1
7,8
IC26A
74LCX08MTC
3,10 BOOTCS
FMCS9_2
16 SLCTIN
10 SLCTIN_P
3 3_LDATA[15:0]
IC34
74LCX16373MEA
IC31
3 ALE
C151
C193
IOA[15:1]
10,11

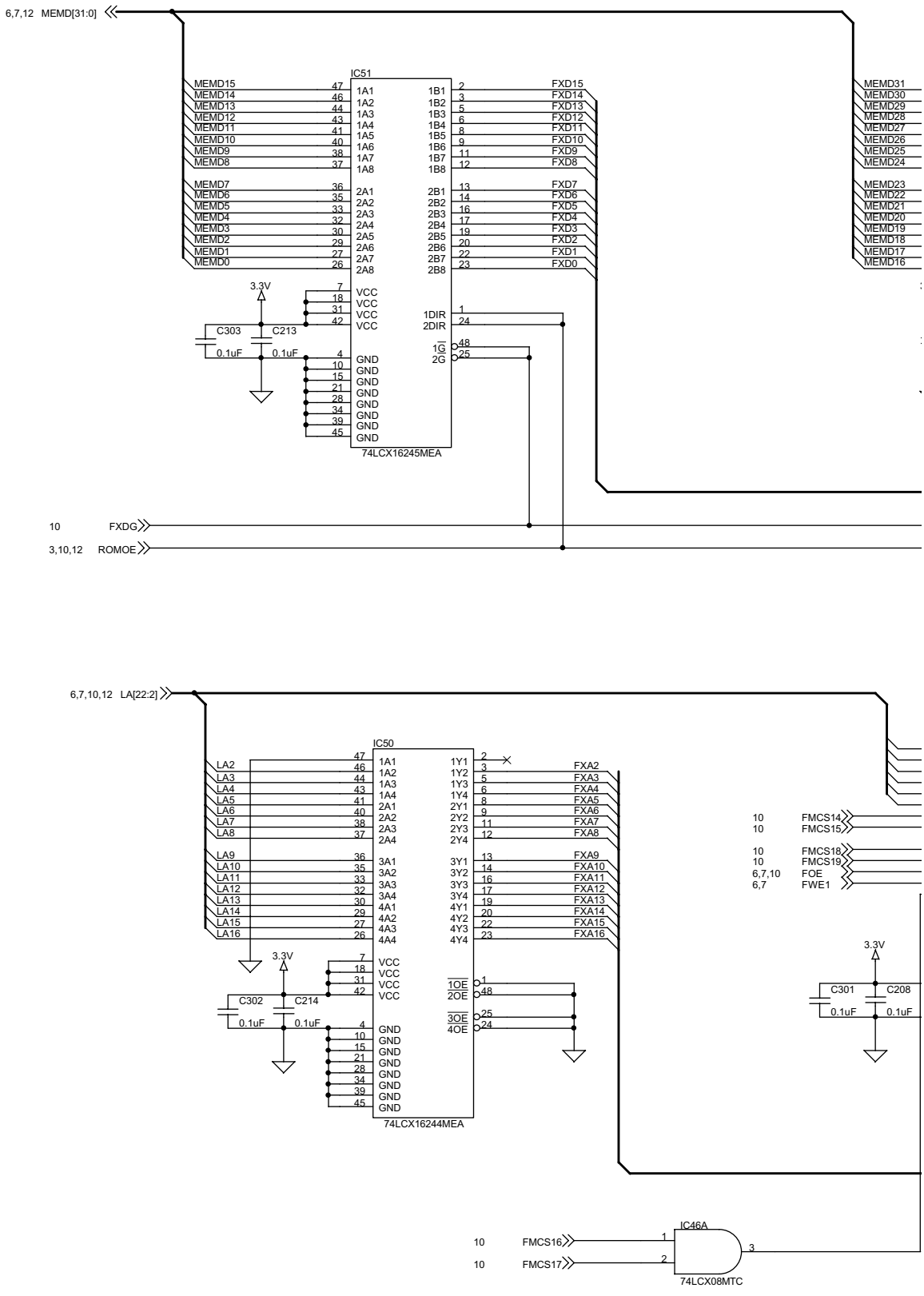

IC24
74LCX16245MEA
IC16
74LCX16245MEA
MEMD[31:0] 7,8,12
ROMBUFOE
ROMBUFDIR
C292
C63
0.1uF
3.3V
10,11 IOD[15:0]
BR89
BR90
BR91
BR92
7,8,12 MEMD[31:0]
BR88
BR87
BR86
BR85
BR84
BR83
BR82
BR81
C139
IC26A
IC26B
74LCX08MTC
FMCS9_2 7
SLCTIN 16
SLCTIN_P 10
SLCTIN2 10
IC31
LDATA[15:1] 10,11
C193
LOE 3,10
IODG 10
IOD[15:0] 10,11

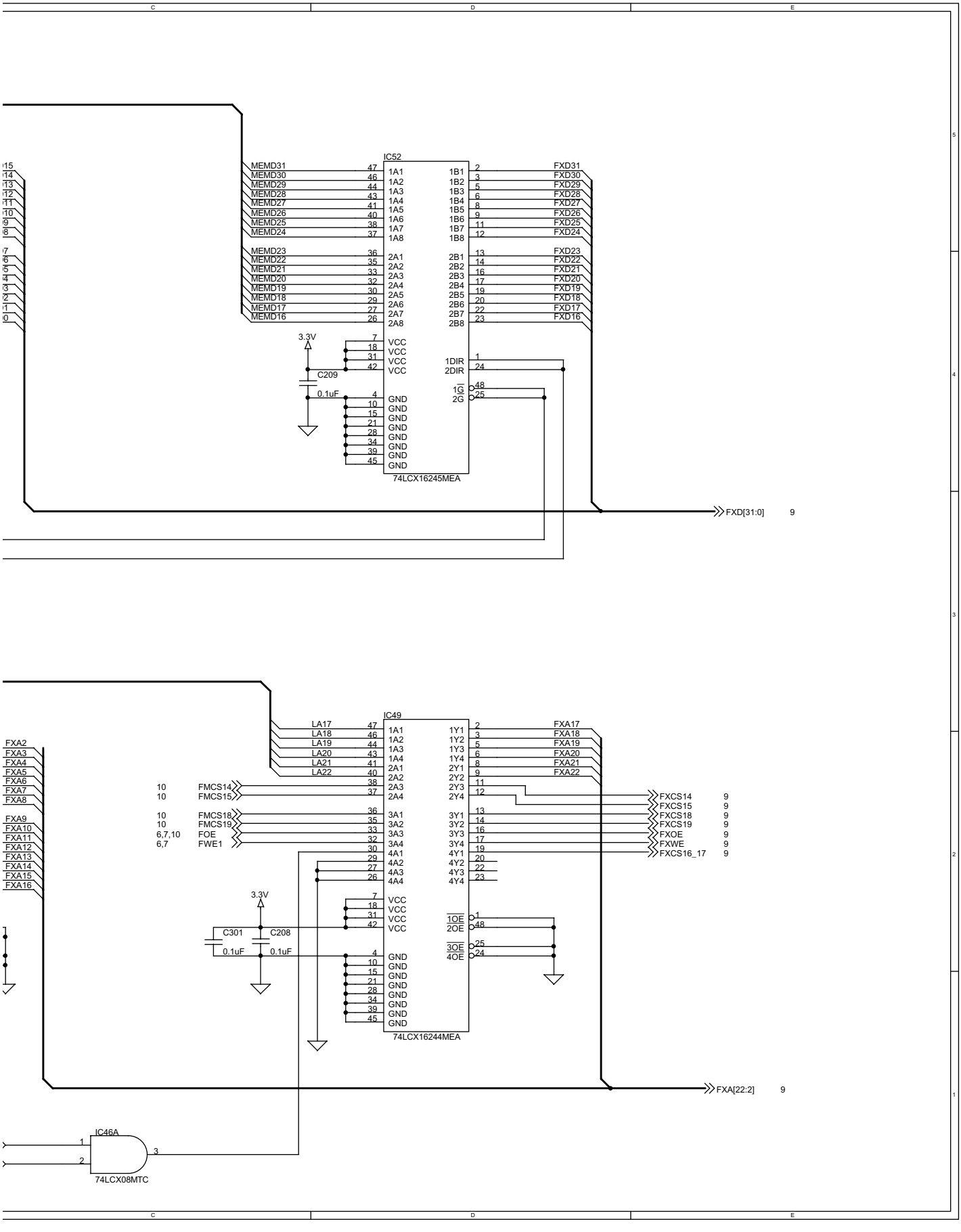
# [FLASH SDIMM]


6,8,12 MEMD[31:0]
6,8,10,12 LA[22:2]
6,8,10 FOE
10 WP
6,8 FWE1
3.3V
R93
10K
9,10 RD/BY
1,2,9 COLDRST
SDIMM4
SDIMM5
CN4
CN5
DMM2-SD72A-1131
R141
0
6 FMCS9_2
FMCS9_1
R140
NO ASM
C77
0.1uF
C66
0.1uF
C65
0.1uF
10 FMCS9
10 FMCS11
10 FMCS13
10 FMCS8
10 FMCS10
10 FMCS12
R108
R106
9,12,13,15 FVCCW
R125
NO ASM
JP2
TS3B-SQ
VCCW
L->H
R423
10K
NO ASM
R422
1K
NO ASM
C111
10uF/16V
FLASHA 19
R166

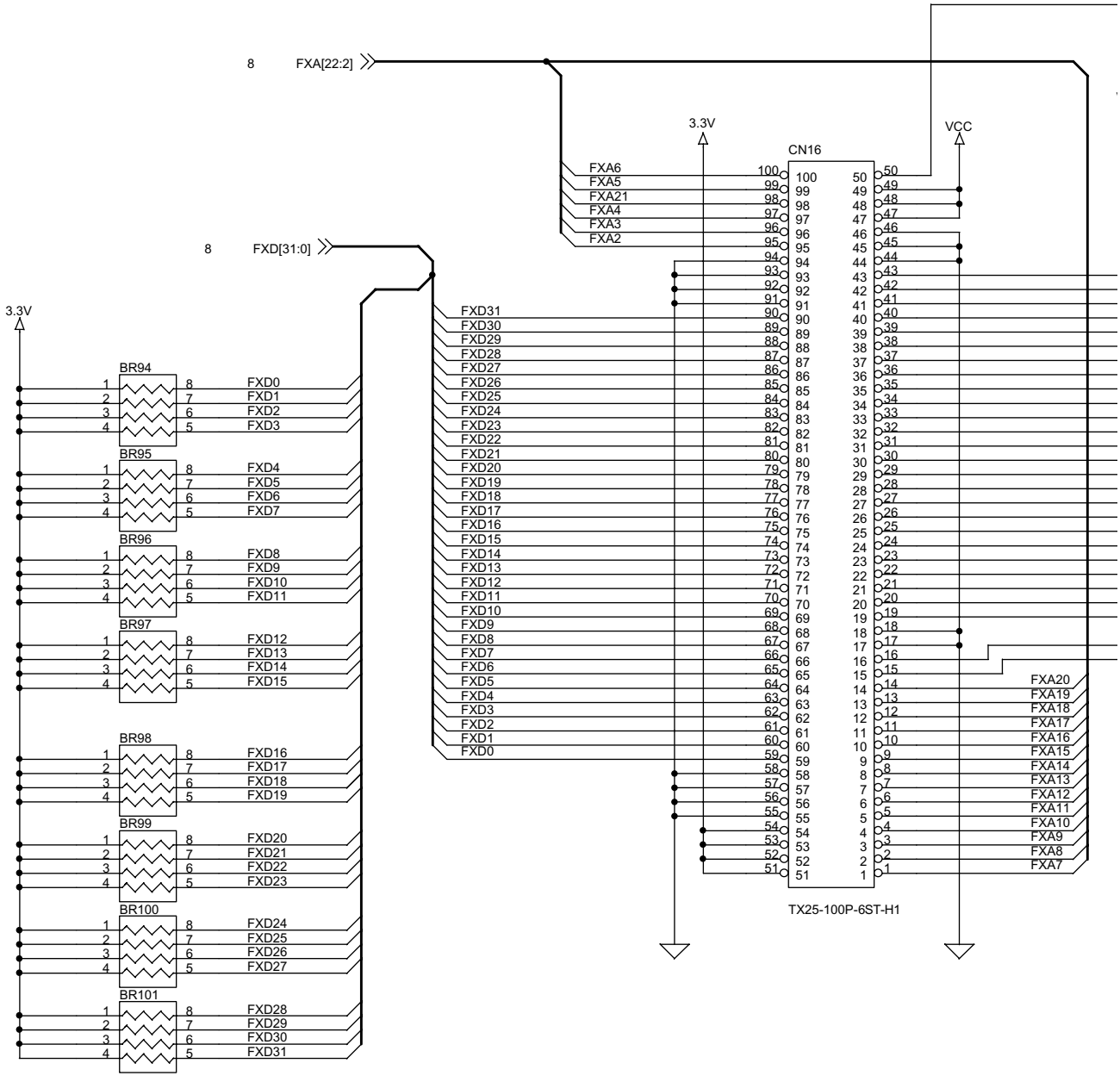

SDIMM5
CN5
SDIMM6
CN6
DMM2-SD72A-1131
DMM2-SD72A-1131
PS-J ROM
CN7
DMM-100G-133FNK31
ASM ONLY FOR JAPAN
3.3V
VCC
C65
0.1uF
C67
0.1uF
C79
0.1uF
C141
0.1uF
C142
0.1uF
C136
22uF/16V
R423
10K
NO ASM
1K
FLASHA
19
R124
4.7K
C119
0.1uF
C224
10uF/16V
IC23
CTRL
GND
N.C
NOISE BYPASS
Vin
N.C
N.C
Vout
NJM2370R04
D22
RB451F
FVCCW
9,12,13,15

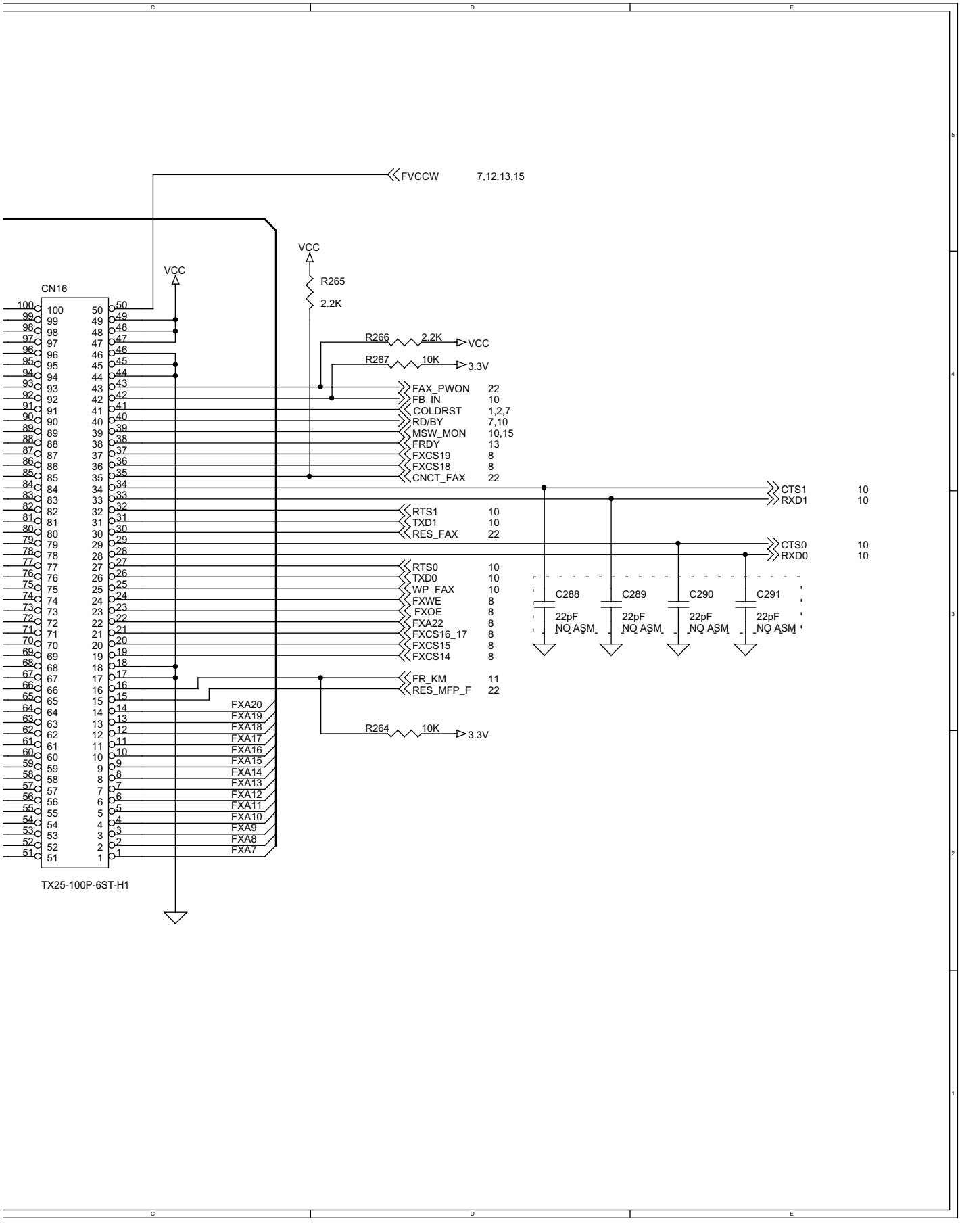
# [FAX I/F BUF]

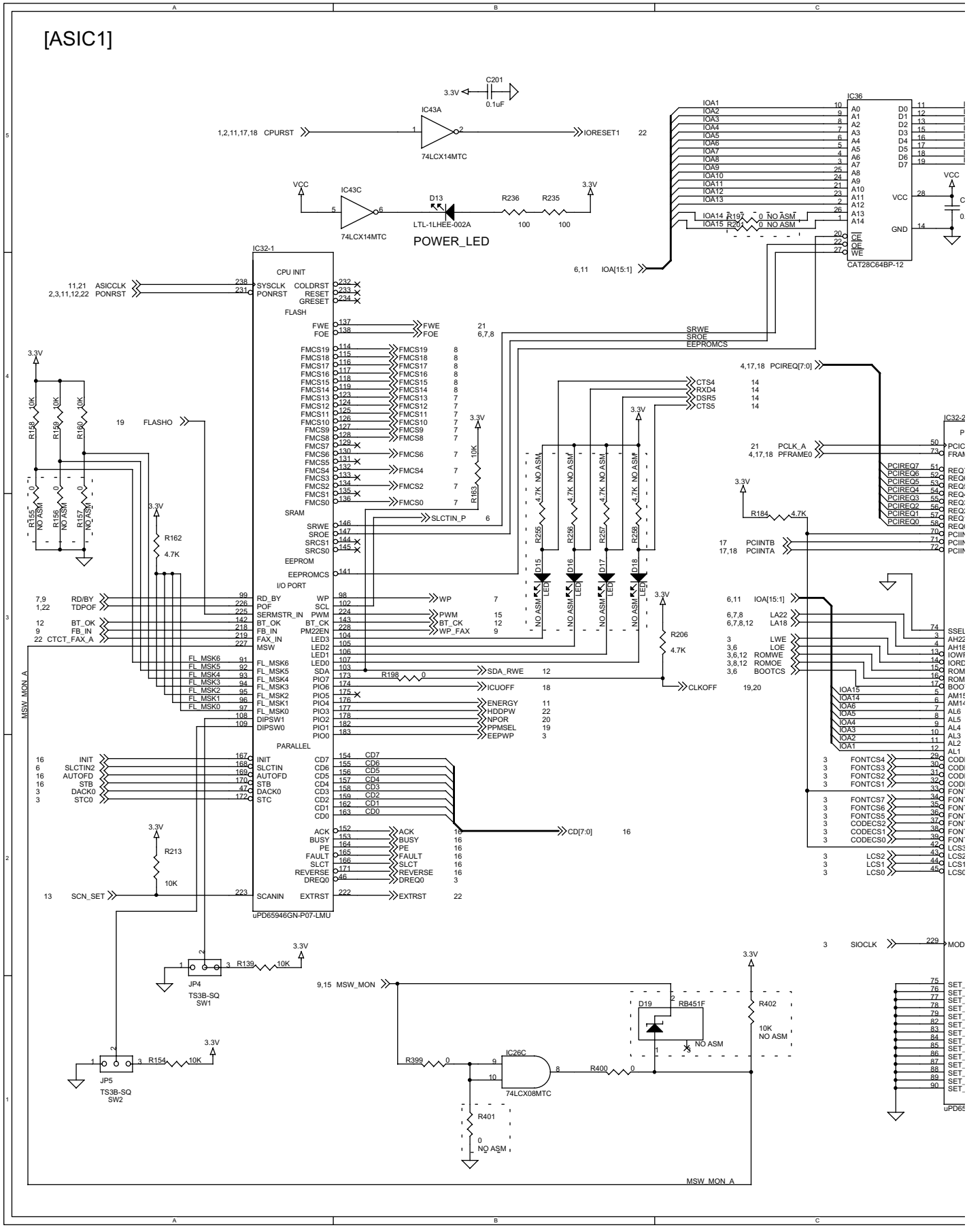

6,7,12 MEMD[31:0]
IC51
MEMD15 MEMD14 MEMD13 MEMD12 MEMD11 MEMD10 MEMD9 MEMD8
MEMD7 MEMD6 MEMD5 MEMD4 MEMD3 MEMD2 MEMD1 MEMD0
1A1 1A2 1A3 1A4 1A5 1A6 1A7 1A8
2A1 2A2 2A3 2A4 2A5 2A6 2A7 2A8
1B1 1B2 1B3 1B4 1B5 1B6 1B7 1B8
2B1 2B2 2B3 2B4 2B5 2B6 2B7 2B8
FXD15 FXD14 FXD13 FXD12 FXD11 FXD10 FXD9 FXD8
FXD7 FXD6 FXD5 FXD4 FXD3 FXD2 FXD1 FXD0
MEMD31 MEMD30 MEMD29 MEMD28 MEMD27 MEMD26 MEMD25 MEMD24
MEMD23 MEMD22 MEMD21 MEMD20 MEMD19 MEMD18 MEMD17 MEMD16
3.3V
VCC
GND
1DIR
2DIR
1G
2G
C303 0.1uF
C213 0.1uF
74LCX16245MEA
10 FXDG
3,10,12 ROMOE
6,7,10,12 LA[22:2]
IC50
LA2 LA3 LA4 LA5 LA6 LA7 LA8
LA9 LA10 LA11 LA12 LA13 LA14 LA15 LA16
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4
3A1 3A2 3A3 3A4 4A1 4A2 4A3 4A4
1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4
3Y1 3Y2 3Y3 3Y4 4Y1 4Y2 4Y3 4Y4
FXA2 FXA3 FXA4 FXA5 FXA6 FXA7 FXA8
FXA9 FXA10 FXA11 FXA12 FXA13 FXA14 FXA15 FXA16
1OE 2OE 3OE 4OE
C302 0.1uF
C214 0.1uF
74LCX16244MEA
10 FMCS14
10 FMCS15
10 FMCS18
10 FMCS19
6,7,10 FOE
6,7 FWE1
C301 0.1uF
C208 0.1uF
IC46A
10 FMCS16
10 FMCS17
74LCX08MTC

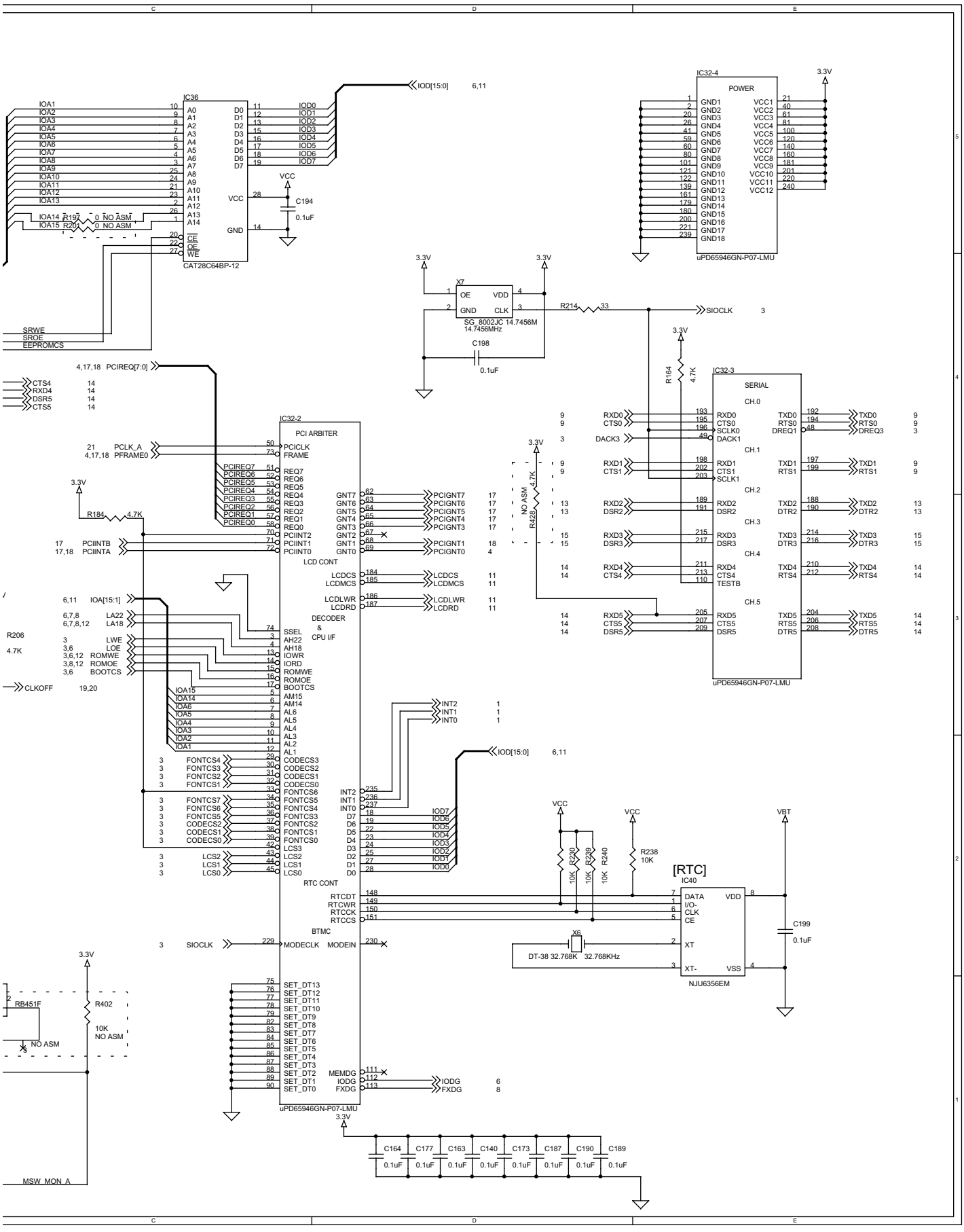

IC52
MEMD31
MEMD30
MEMD29
MEMD28
MEMD27
MEMD26
MEMD25
MEMD24
MEMD23
MEMD22
MEMD21
MEMD20
MEMD19
MEMD18
MEMD17
MEMD16
1A1
1A2
1A3
1A4
1A5
1A6
1A7
1A8
2A1
2A2
2A3
2A4
2A5
2A6
2A7
2A8
1B1
1B2
1B3
1B4
1B5
1B6
1B7
1B8
2B1
2B2
2B3
2B4
2B5
2B6
2B7
2B8
FXD31
FXD30
FXD29
FXD28
FXD27
FXD26
FXD25
FXD24
FXD23
FXD22
FXD21
FXD20
FXD19
FXD18
FXD17
FXD16
3.3V
VCC
1DIR
2DIR
1G
2G
C209
0.1uF
GND
74LCX16245MEA
FXD[31:0]
9
IC49
LA17
LA18
LA19
LA20
LA21
LA22
FXA17
FXA18
FXA19
FXA20
FXA21
FXA22
FXA2
FXA3
FXA4
FXA5
FXA6
FXA7
FXA8
FXA9
FXA10
FXA11
FXA12
FXA13
FXA14
FXA15
FXA16
FMCS14
FMCS15
FMCS18
FMCS19
FOE
FWE1
FXCS14
FXCS15
FXCS18
FXCS19
FXOE
FXWE
FXCS16_17
1Y1
1Y2
1Y3
1Y4
2Y1
2Y2
2Y3
2Y4
3Y1
3Y2
3Y3
3Y4
4Y1
4Y2
4Y3
4Y4
1OE
2OE
3OE
4OE
C301
C208
0.1uF
74LCX16244MEA
FXA[22:2]
IC46A
74LCX08MTC

# [FAX I/F CN]

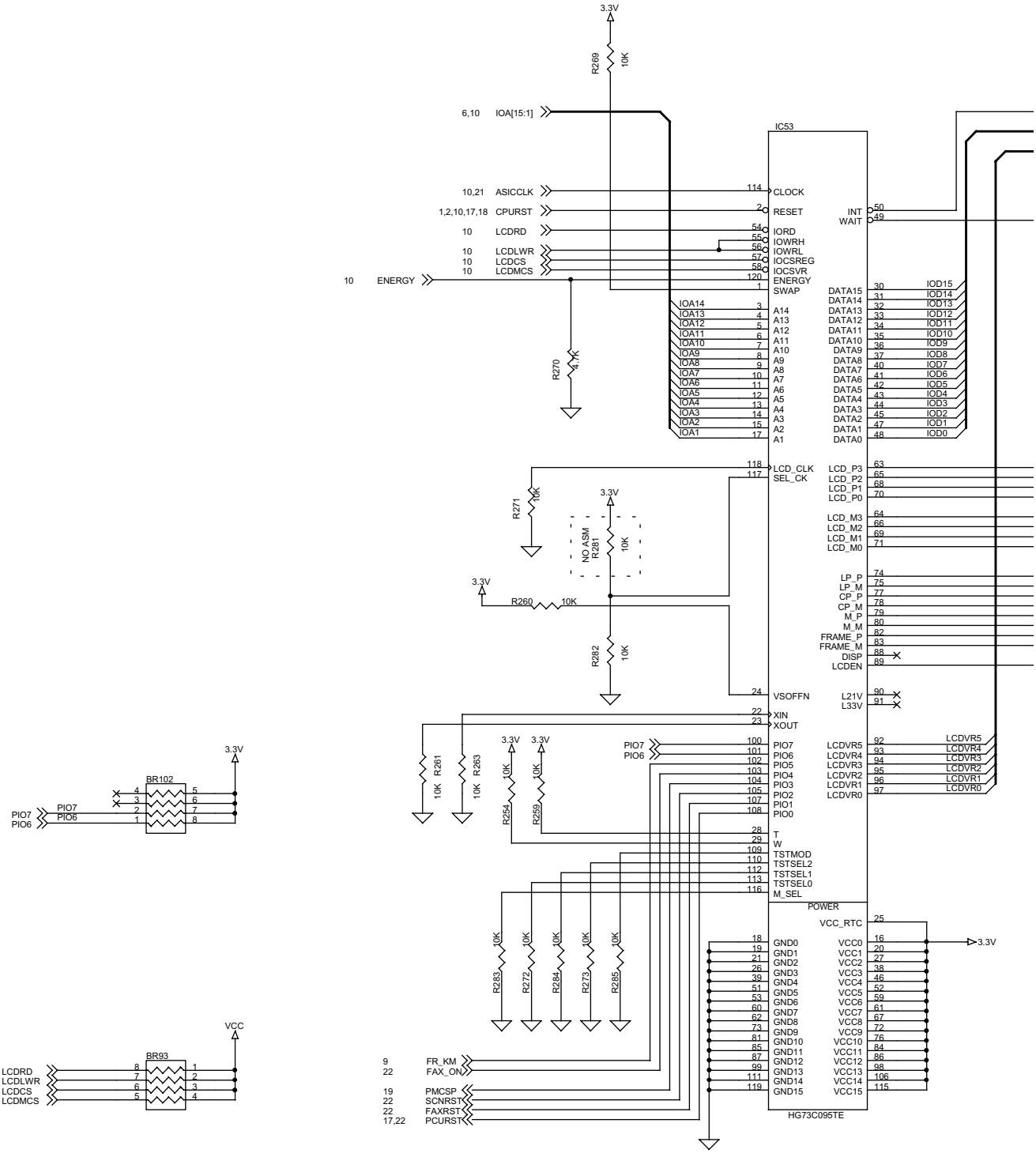

8 FXA[22:2]
8 FXD[31:0]
3.3V
VCC
CN16
FXA6
FXA5
FXA21
FXA4
FXA3
FXA2
FXD31
FXD30
FXD29
FXD28
FXD27
FXD26
FXD25
FXD24
FXD23
FXD22
FXD21
FXD20
FXD19
FXD18
FXD17
FXD16
FXD15
FXD14
FXD13
FXD12
FXD11
FXD10
FXD9
FXD8
FXD7
FXD6
FXD5
FXD4
FXD3
FXD2
FXD1
FXD0
FXA20
FXA19
FXA18
FXA17
FXA16
FXA15
FXA14
FXA13
FXA12
FXA11
FXA10
FXA9
FXA8
FXA7
TX25-100P-6ST-H1
BR94
BR95
BR96
BR97
BR98
BR99
BR100
BR101

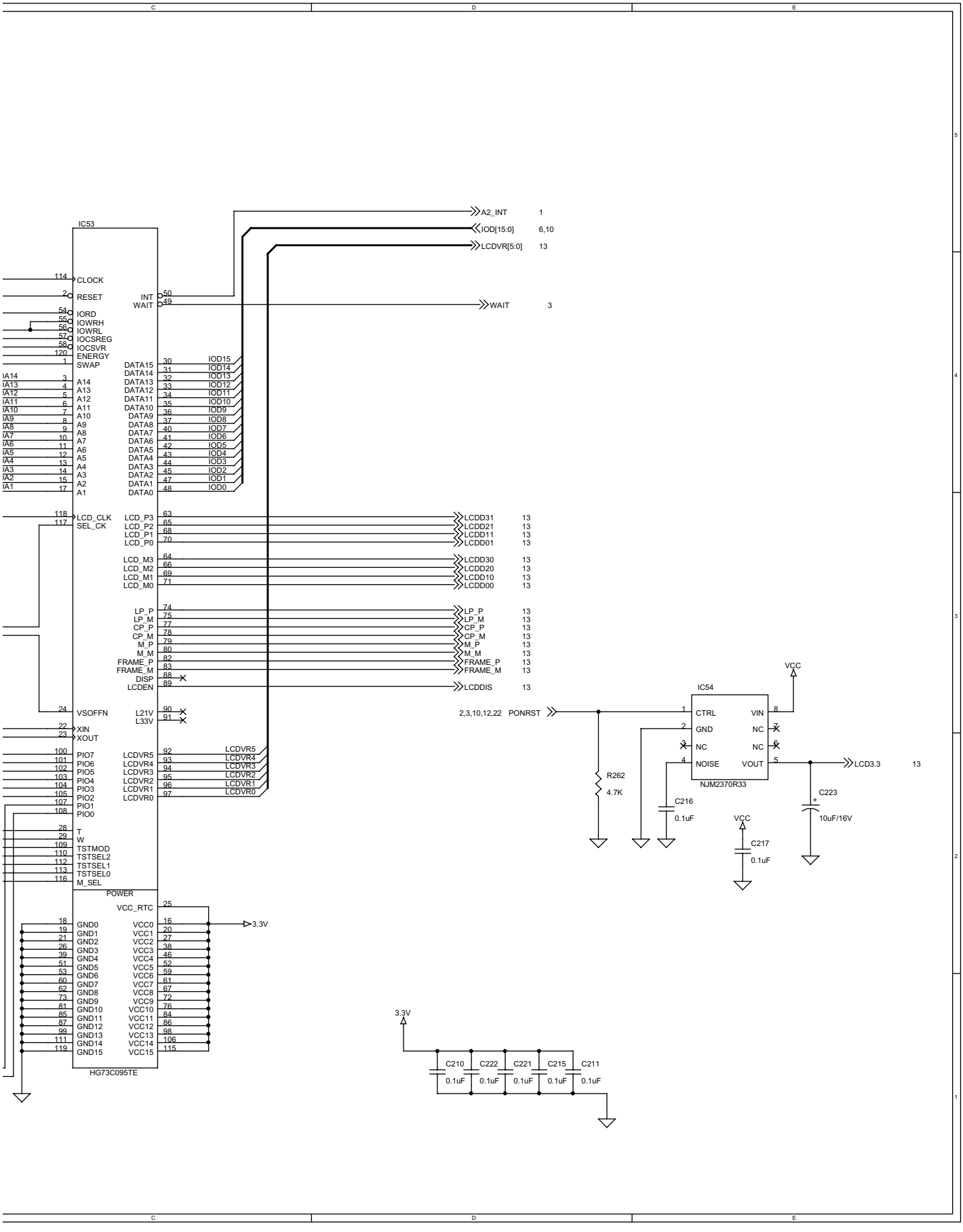

FVCCW 7,12,13,15
VCC
R265
2.2K
VCC
CN16
R266 2.2K VCC
R267 10K 3.3V
FAX_PWON 22
FB_IN 10
COLDRST 1,2,7
RD/BY 7,10
MSW_MON 10,15
FRDY 13
FXCS19 8
FXCS18 8
CNCT_FAX 22
CTS1 10
RXD1 10
RTS1 10
TXD1 10
RES_FAX 22
CTS0 10
RXD0 10
RTS0 10
TXD0 10
WP_FAX 10
FXWE 8
FXOE 8
FXA22 8
FXCS16_17 8
FXCS15 8
FXCS14 8
C288 22pF NO ASM
C289 22pF NO ASM
C290 22pF NO ASM
C291 22pF NO ASM
FR_KM 11
RES_MFP_F 22
R264 10K 3.3V
FXA20
FXA19
FXA18
FXA17
FXA16
FXA15
FXA14
FXA13
FXA12
FXA11
FXA10
FXA9
FXA8
FXA7
TX25-100P-6ST-H1


[ASIC1]
POWER_LED
IC32-1
CPU INIT
FLASH
SRAM
EEPROM
I/O PORT
PARALLEL
uPD65946GN-P07-LMU
IC36
CAT28C64BP-12
74LCX14MTC
74LCX08MTC
LTL-1LHEE-002A
TS3B-SQ SW1
TS3B-SQ SW2
MSW_MON_A

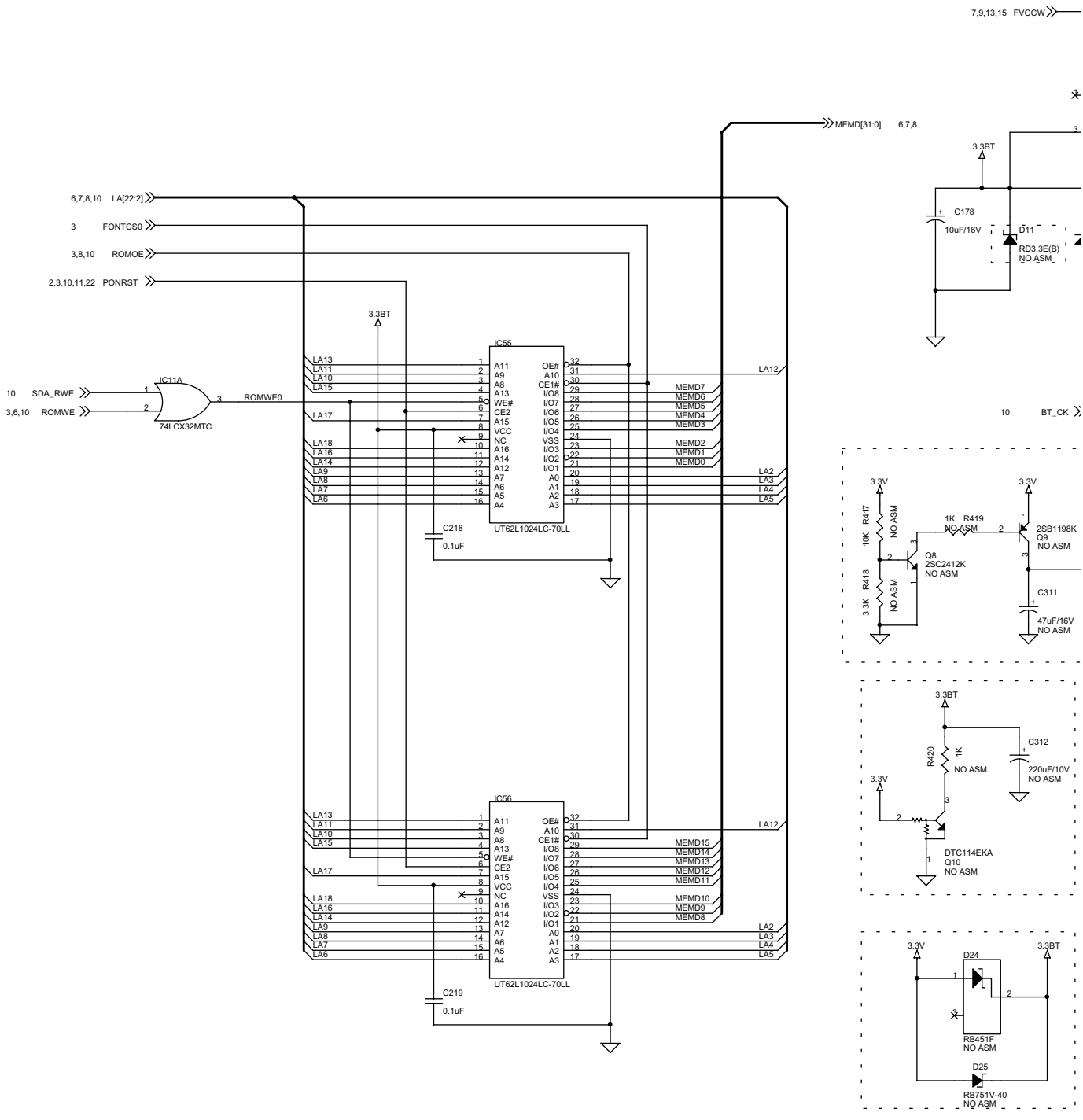

IC36
CAT28C64BP-12
IOD[15:0] 6,11
IOA1
IOA2
IOA3
IOA4
IOA5
IOA6
IOA7
IOA8
IOA9
IOA10
IOA11
IOA12
IOA13
IOA14 R197 0 NO ASM
IOA15 R20 0 NO ASM
VCC
C194
0.1uF
SRWE
SROE
EEPROMCS
IC32-4
POWER
uPD65946GN-P07-LMU
3.3V
X7
SG_8002JC 14.7456M
14.7456MHz
R214 33
SIOCLK 3
C198
0.1uF
R164 4.7K
IC32-3
SERIAL
CH.0
CH.1
CH.2
CH.3
CH.4
CH.5
TESTB
uPD65946GN-P07-LMU
4,17,18 PCIREQ[7:0]
CTS4 14
RXD4 14
DSR5 14
CTS5 14
IC32-2
PCI ARBITER
PCICLK
FRAME
REQ7
REQ6
REQ5
REQ4
REQ3
REQ2
REQ1
REQ0
PCIINT2
PCIINT1
PCIINT0
GNT7
GNT6
GNT5
GNT4
GNT3
GNT2
GNT1
GNT0
PCIGNT7 17
PCIGNT6 17
PCIGNT5 17
PCIGNT4 17
PCIGNT3 17
PCIGNT1 18
PCIGNT0 4
LCD CONT
LCDCS
LCDMCS
LCDLWR
LCDRD
DECODER
&
CPU I/F
SSEL
AH22
AH18
IOWR
IORD
ROMWE
ROMOE
BOOTCS
AM15
AM14
AL6
AL5
AL4
AL3
AL2
AL1
INT2
INT1
INT0
CODECS3
CODECS2
CODECS1
CODECS0
FONTCS6
FONTCS5
FONTCS4
FONTCS3
FONTCS2
FONTCS1
FONTCS0
LCS3
LCS2
LCS1
LCS0
RTC CONT
RTCDT
RTCWR
RTCCK
RTCCS
BTMC
MODECLK
MODEIN
SET_DT13
SET_DT12
SET_DT11
SET_DT10
SET_DT9
SET_DT8
SET_DT7
SET_DT6
SET_DT5
SET_DT4
SET_DT3
SET_DT2
SET_DT1
SET_DT0
MEMDG
IODG 6
FXDG 8
uPD65946GN-P07-LMU
6,11 IOA[15:1]
6,7,8 LA22
6,7,8,12 LA18
R206 4.7K
3 LWE
3,6 LOE
3,6,12 ROMWE
3,8,12 ROMOE
3,6 BOOTCS
CLKOFF 19,20
17 PCIINTB
17,18 PCIINTA
R184 4.7K
R428 4.7K NO ASM
[RTC]
IC40
NJU6356EM
X6
DT-38 32.768K 32.768KHz
R230 10K
R239 10K
R240 10K
R238 10K
C199
0.1uF
VBT
RB451F
R402 10K NO ASM
MSW_MON_A
C164 C177 C163 C140 C173 C187 C190 C189
0.1uF

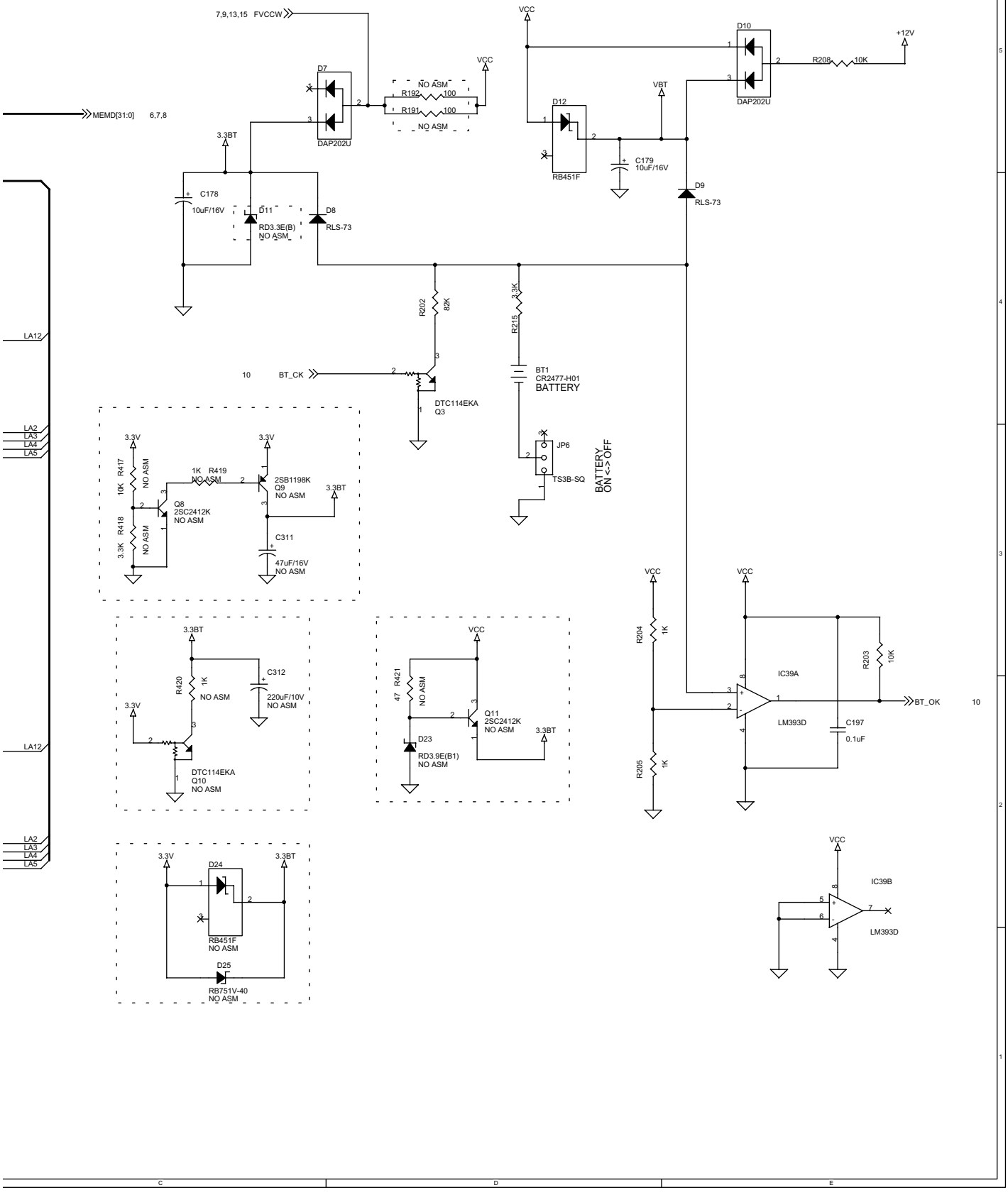
# [ASIC2]

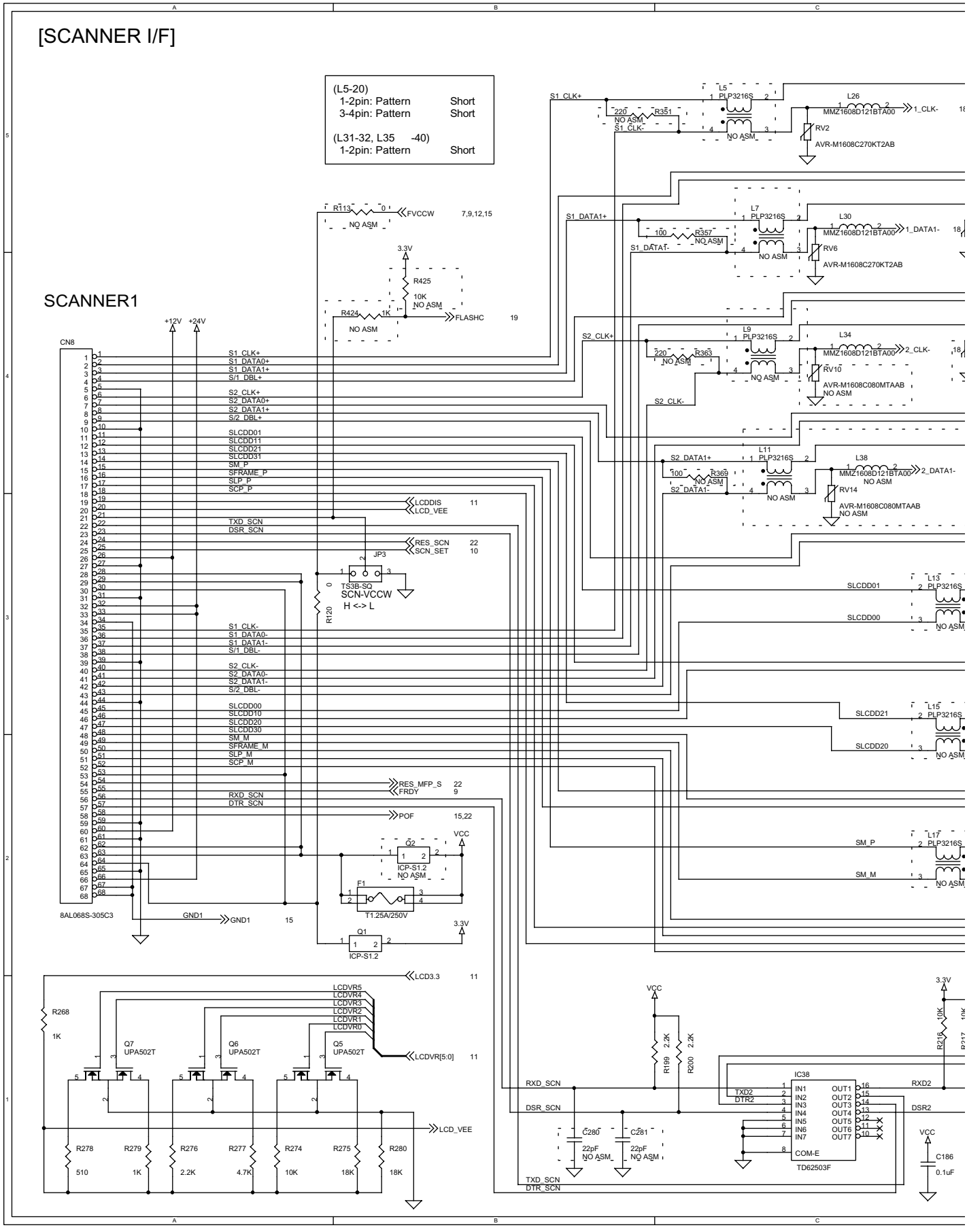

3.3V
R269
10K
6,10 IOA[15:1]
IC53
10,21 ASICCLK
1,2,10,17,18 CPURST
10 LCDRD
10 LCDLWR
10 LCDCS
10 LCDMCS
10 ENERGY
CLOCK
RESET
IORD
IOWRH
IOWRL
IOCSREG
IOCSVR
ENERGY
SWAP
INT
WAIT
IOA14 IOA13 IOA12 IOA11 IOA10 IOA9 IOA8 IOA7 IOA6 IOA5 IOA4 IOA3 IOA2 IOA1
A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1
DATA15 DATA14 DATA13 DATA12 DATA11 DATA10 DATA9 DATA8 DATA7 DATA6 DATA5 DATA4 DATA3 DATA2 DATA1 DATA0
IOD15 IOD14 IOD13 IOD12 IOD11 IOD10 IOD9 IOD8 IOD7 IOD6 IOD5 IOD4 IOD3 IOD2 IOD1 IOD0
R270
4.7K
LCD_CLK
SEL_CK
LCD_P3 LCD_P2 LCD_P1 LCD_P0
LCD_M3 LCD_M2 LCD_M1 LCD_M0
LP_P LP_M CP_P CP_M M_P M_M FRAME_P FRAME_M DISP LCDEN
R271
10K
NO ASM
R261
R260
R282
VSOFFN
L21V
L33V
XIN
XOUT
R261 R263
R254 R259
PIO7 PIO6
LCDVR5 LCDVR4 LCDVR3 LCDVR2 LCDVR1 LCDVR0
T
W
TSTMOD
TSTSEL2
TSTSEL1
TSTSEL0
M_SEL
POWER
VCC_RTC
GND0 GND1 GND2 GND3 GND4 GND5 GND6 GND7 GND8 GND9 GND10 GND11 GND12 GND13 GND14 GND15
VCC0 VCC1 VCC2 VCC3 VCC4 VCC5 VCC6 VCC7 VCC8 VCC9 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15
R283 R272 R284 R273 R285
HG73C095TE
BR102
PIO7
PIO6
BR93
VCC
LCDRD
LCDLWR
LCDCS
LCDMCS
9 FR_KM
22 FAX_ON
19 PMCSP
22 SCNRST
22 FAXRST
17,22 PCURST

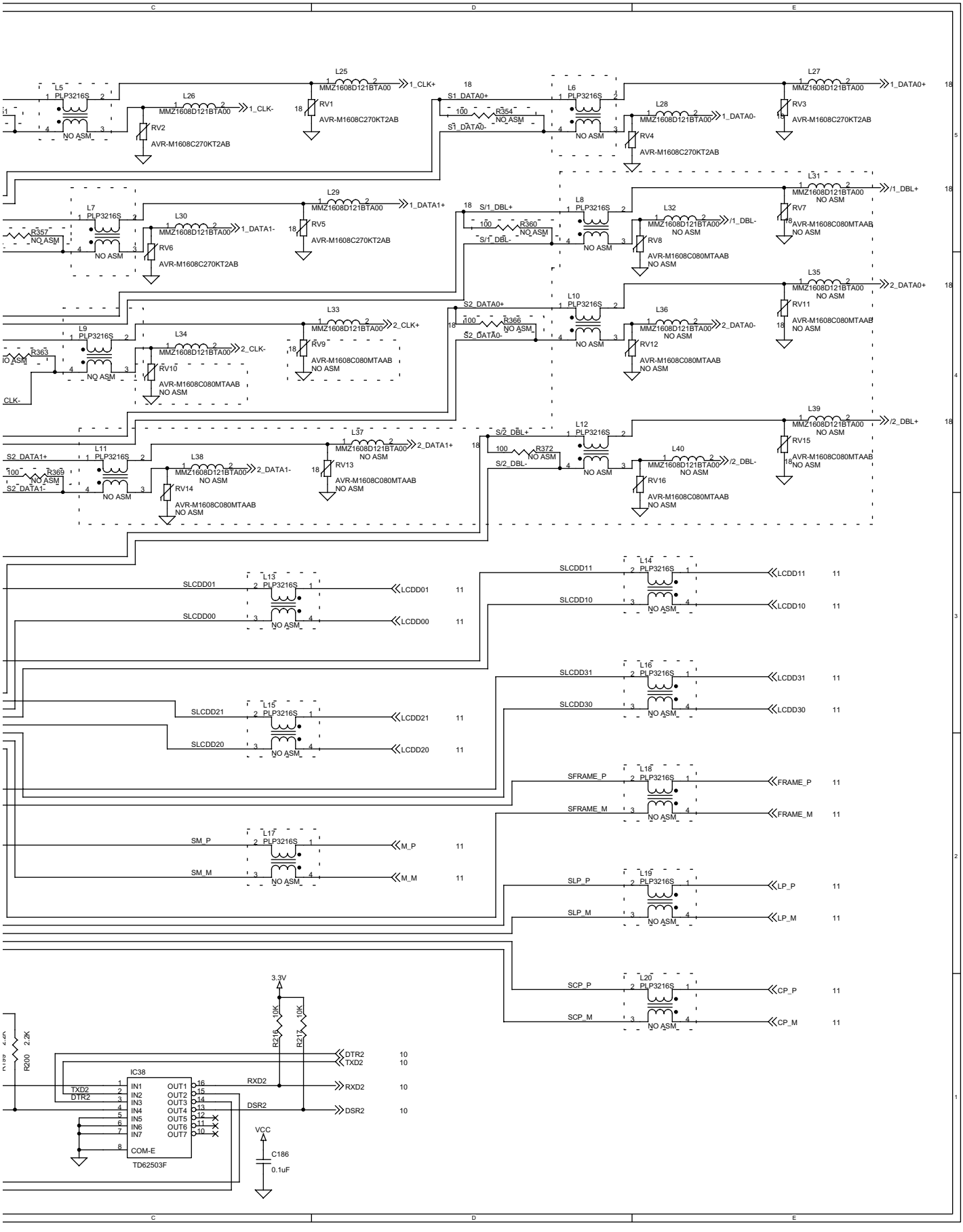

IC53
CLOCK
RESET
IORD
IOWRH
IOWRL
IOCSREG
IOCSVR
ENERGY
SWAP
A14
A13
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
LCD_CLK
SEL_CK
VSOFFN
XIN
XOUT
PIO7
PIO6
PIO5
PIO4
PIO3
PIO2
PIO1
PIO0
T
W
TSTMOD
TSTSEL2
TSTSEL1
TSTSEL0
M_SEL
POWER
VCC_RTC
GND0
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
GND10
GND11
GND12
GND13
GND14
GND15
VCC0
VCC1
VCC2
VCC3
VCC4
VCC5
VCC6
VCC7
VCC8
VCC9
VCC10
VCC11
VCC12
VCC13
VCC14
VCC15
HG73C095TE
INT
WAIT
DATA15
DATA14
DATA13
DATA12
DATA11
DATA10
DATA9
DATA8
DATA7
DATA6
DATA5
DATA4
DATA3
DATA2
DATA1
DATA0
LCD_P3
LCD_P2
LCD_P1
LCD_P0
LCD_M3
LCD_M2
LCD_M1
LCD_M0
LP_P
LP_M
CP_P
CP_M
M_P
M_M
FRAME_P
FRAME_M
DISP
LCDEN
L21V
L33V
LCDVR5
LCDVR4
LCDVR3
LCDVR2
LCDVR1
LCDVR0
A2_INT 1
IOD[15:0] 6,10
LCDVR[5:0] 13
WAIT 3
IOD15
IOD14
IOD13
IOD12
IOD11
IOD10
IOD9
IOD8
IOD7
IOD6
IOD5
IOD4
IOD3
IOD2
IOD1
IOD0
LCDD31 13
LCDD21 13
LCDD11 13
LCDD01 13
LCDD30 13
LCDD20 13
LCDD10 13
LCDD00 13
LP_P 13
LP_M 13
CP_P 13
CP_M 13
M_P 13
M_M 13
FRAME_P 13
FRAME_M 13
LCDDIS 13
2,3,10,12,22 PONRST
3.3V
IC54
CTRL
GND
NC
NOISE
VIN
NC
NC
VOUT
NJM2370R33
LCD3.3 13
VCC
R262
4.7K
C216
0.1uF
C217
0.1uF
C223
10uF/16V
C210
C222
C221
C215
C211
0.1uF

# [SRAM / BATTERY]



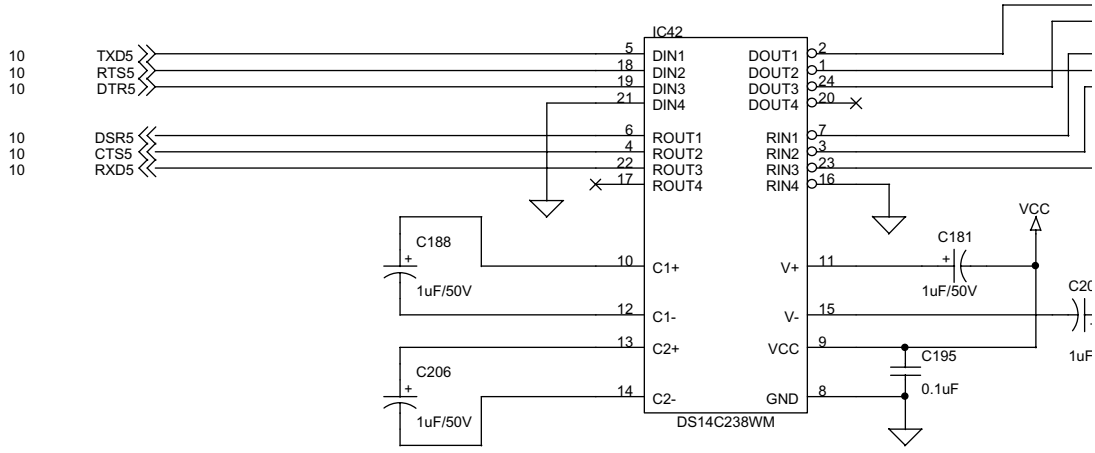

7,9,13,15 FVCCW
MEMD[31:0] 6,7,8
VCC
D7
DAP202U
R192 100
R191 100
NO ASM
3.3BT
C178
10uF/16V
D11
RD3.3E(B)
NO ASM
D8
RLS-73
D10
DAP202U
+12V
R208 10K
VBT
D12
RB451F
C179
10uF/16V
D9
RLS-73
R202 82K
R215 3.3K
BT1
CR2477-H01
BATTERY
10 BT_CK
DTC114EKA
Q3
JP6
TS3B-SQ
BATTERY
ON <-> OFF
LA12
LA2
LA3
LA4
LA5
3.3V
R417 10K NO ASM
R418 3.3K NO ASM
1K R419 NO ASM
Q8
2SC2412K
NO ASM
2SB1198K
Q9
NO ASM
C311
47uF/16V
NO ASM
R420 1K NO ASM
C312
220uF/10V
NO ASM
DTC114EKA
Q10
NO ASM
R421 47 NO ASM
Q11
2SC2412K
NO ASM
D23
RD3.9E(B1)
NO ASM
R204 1K
R205 1K
IC39A
LM393D
R203 10K
C197
0.1uF
BT_OK 10
D24
RB451F
NO ASM
D25
RB751V-40
NO ASM
IC39B
LM393D


[SCANNER I/F]
SCANNER1
(L5-20)
1-2pin: Pattern Short
3-4pin: Pattern Short
(L31-32, L35 -40)
1-2pin: Pattern Short
CN8
8AL068S-305C3
+12V
+24V
3.3V
GND1
S1_CLK+
S1_DATA0+
S1_DATA1+
S/1_DBL+
S2_CLK+
S2_DATA0+
S2_DATA1+
S/2_DBL+
SLCDD01
SLCDD11
SLCDD21
SLCDD31
SM_P
SFRAME_P
SLP_P
SCP_P
TXD_SCN
DSR_SCN
S1_CLK-
S1_DATA0-
S1_DATA1-
S/1_DBL-
S2_CLK-
S2_DATA0-
S2_DATA1-
S/2_DBL-
SLCDD00
SLCDD10
SLCDD20
SLCDD30
SM_M
SFRAME_M
SLP_M
SCP_M
RXD_SCN
DTR_SCN
R113
FVCCW
NO ASM
R425
10K
R424
1K
FLASHC
LCDDIS
LCD_VEE
RES_SCN
SCN_SET
JP3
TS3B-SQ
SCN-VCCW
H <-> L
R120
RES_MFP_S
FRDY
POF
Q2
ICP-S1.2
F1
T1.25A/250V
Q1
LCD3.3
LCDVR5
LCDVR4
LCDVR3
LCDVR2
LCDVR1
LCDVR0
LCDVR[5:0]
R268
Q7 UPA502T
Q6 UPA502T
Q5 UPA502T
LCD_VEE
R278 510
R279 1K
R276 2.2K
R277 4.7K
R274 10K
R275 18K
R280 18K
L5 PLP3216S
L7 PLP3216S
L9 PLP3216S
L11 PLP3216S
L13 PLP3216S
L15 PLP3216S
L17 PLP3216S
L26 MMZ1608D121BTA00
L30 MMZ1608D121BTA00
L34 MMZ1608D121BTA00
L38 MMZ1608D121BTA00
RV2 AVR-M1608C270KT2AB
RV6 AVR-M1608C270KT2AB
RV10 AVR-M1608C080MTAAB
RV14 AVR-M1608C080MTAAB
R351 220
R357 100
R363 220
R369 100
1_CLK-
1_DATA1-
2_CLK-
2_DATA1-
IC38
TD62503F
IN1 IN2 IN3 IN4 IN5 IN6 IN7
OUT1 OUT2 OUT3 OUT4 OUT5 OUT6 OUT7
COM-E
TXD2
DTR2
RXD2
DSR2
R199 2.2K
R200 2.2K
R216 10K
C280 22pF
C281 22pF
C186 0.1uF
VCC

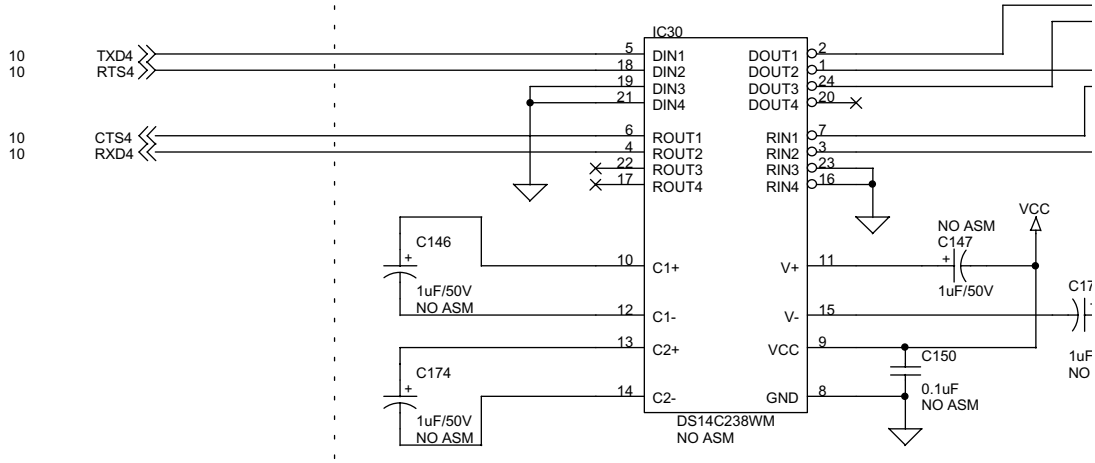

L5 PLP3216S
L26 MMZ1608D121BTA00
1_CLK-
RV2 AVR-M1608C270KT2AB
NO ASM
L25 MMZ1608D121BTA00
1_CLK+
RV1 AVR-M1608C270KT2AB
S1_DATA0+
100 R354 NO ASM
S1_DATA0-
L6 PLP3216S
L28 MMZ1608D121BTA00
1_DATA0-
RV4 AVR-M1608C270KT2AB
L27 MMZ1608D121BTA00
1_DATA0+
RV3 AVR-M1608C270KT2AB
L7 PLP3216S
R357 NO ASM
L30 MMZ1608D121BTA00
1_DATA1-
RV6 AVR-M1608C270KT2AB
L29 MMZ1608D121BTA00
1_DATA1+
RV5 AVR-M1608C270KT2AB
S/1_DBL+
100 R360 NO ASM
S/1_DBL-
L8 PLP3216S
L32 MMZ1608D121BTA00 NO ASM
/1_DBL-
RV8 AVR-M1608C080MTAAB NO ASM
L31 MMZ1608D121BTA00 NO ASM
/1_DBL+
RV7 AVR-M1608C080MTAAB NO ASM
L9 PLP3216S
R363 NO ASM
L34 MMZ1608D121BTA00
2_CLK-
RV10 AVR-M1608C080MTAAB NO ASM
L33 MMZ1608D121BTA00
2_CLK+
RV9 AVR-M1608C080MTAAB NO ASM
S2_DATA0+
100 R366 NO ASM
S2_DATA0-
L10 PLP3216S
L36 MMZ1608D121BTA00 NO ASM
2_DATA0-
RV12 AVR-M1608C080MTAAB NO ASM
L35 MMZ1608D121BTA00 NO ASM
2_DATA0+
RV11 AVR-M1608C080MTAAB NO ASM
L11 PLP3216S
S2_DATA1+
100 R369 NO ASM
S2_DATA1-
L38 MMZ1608D121BTA00 NO ASM
2_DATA1-
RV14 AVR-M1608C080MTAAB NO ASM
L37 MMZ1608D121BTA00 NO ASM
2_DATA1+
RV13 AVR-M1608C080MTAAB NO ASM
S/2_DBL+
100 R372 NO ASM
S/2_DBL-
L12 PLP3216S
L40 MMZ1608D121BTA00 NO ASM
/2_DBL-
RV16 AVR-M1608C080MTAAB NO ASM
L39 MMZ1608D121BTA00 NO ASM
/2_DBL+
RV15 AVR-M1608C080MTAAB NO ASM
SLCDD01
L13 PLP3216S
LCDD01
SLCDD00
LCDD00
SLCDD11
L14 PLP3216S
LCDD11
SLCDD10
LCDD10
SLCDD21
L15 PLP3216S
LCDD21
SLCDD20
LCDD20
SLCDD31
L16 PLP3216S
LCDD31
SLCDD30
LCDD30
SFRAME_P
L18 PLP3216S
FRAME_P
SFRAME_M
FRAME_M
SM_P
L17 PLP3216S
M_P
SM_M
M_M
SLP_P
L19 PLP3216S
LP_P
SLP_M
LP_M
SCP_P
L20 PLP3216S
CP_P
SCP_M
CP_M
3.3V
R215 10K
R217 10K
R200 2.2K
IC38
TD62503F
TXD2
DTR2
RXD2
DSR2
DTR2
TXD2
RXD2
DSR2
VCC
C186
0.1uF

[SIO]

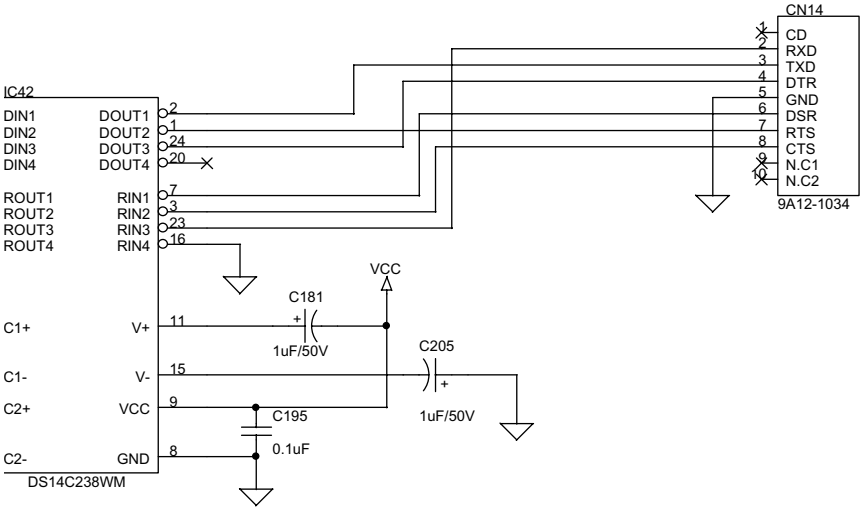
[ RIC I/F (SIO #5) ]



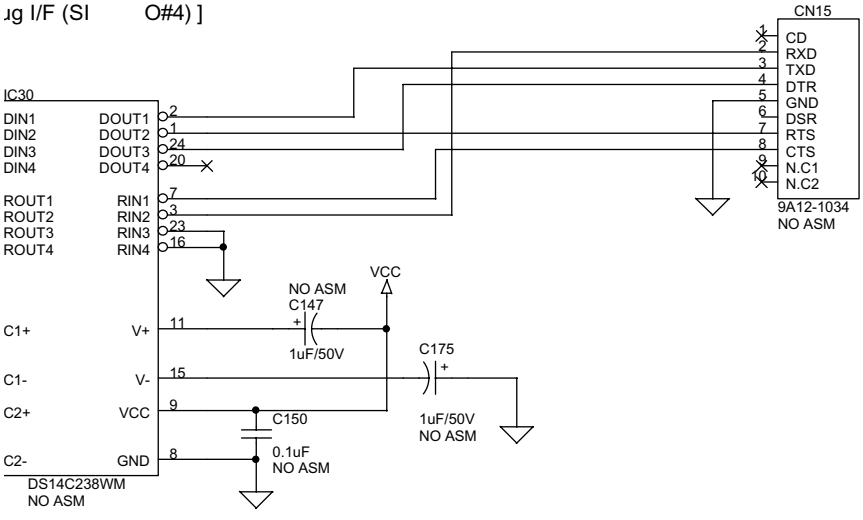

[ Debug I/F (SI O#4) ]



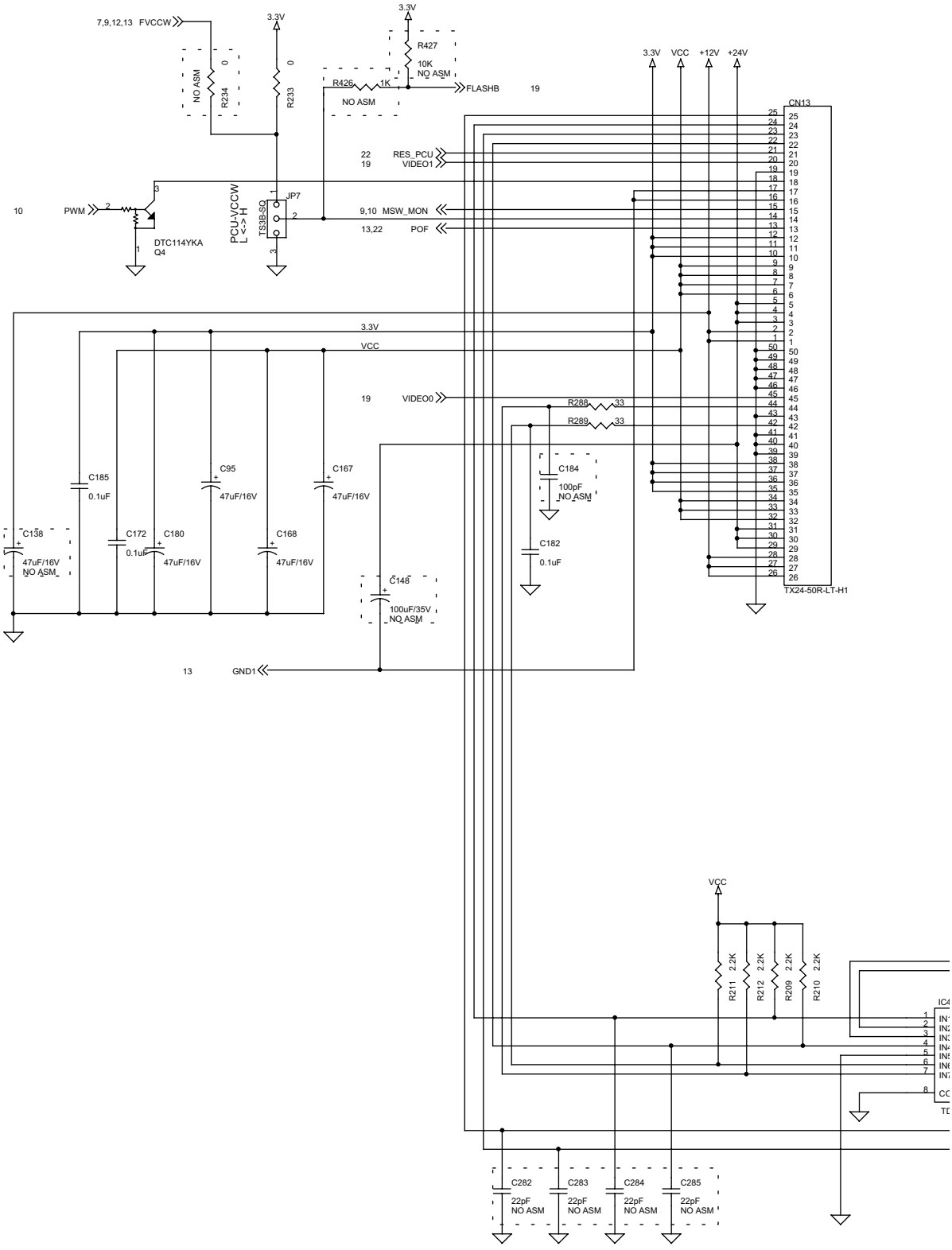
C I/F (SIO #5) ]

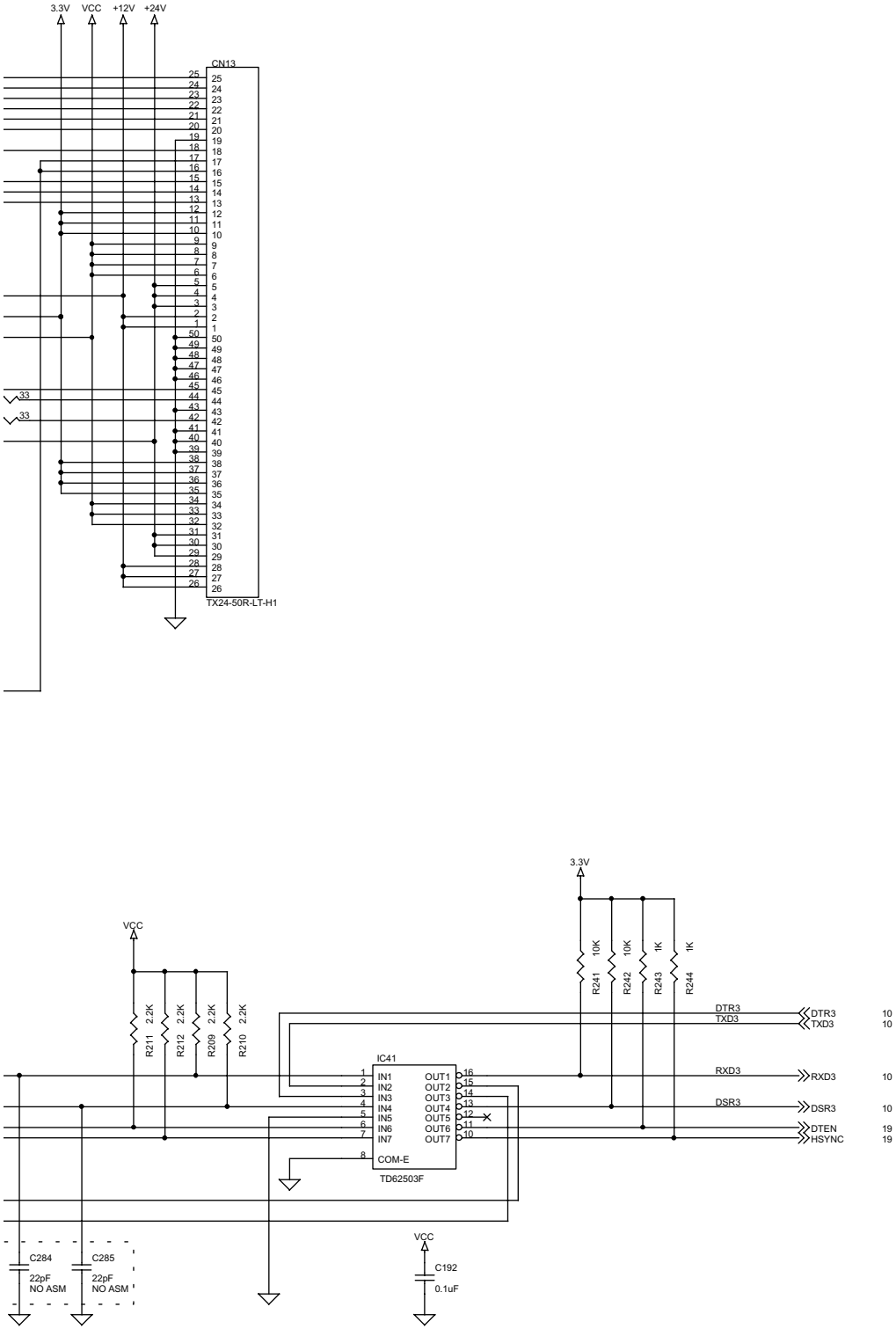



ug I/F (SI O#4) ]

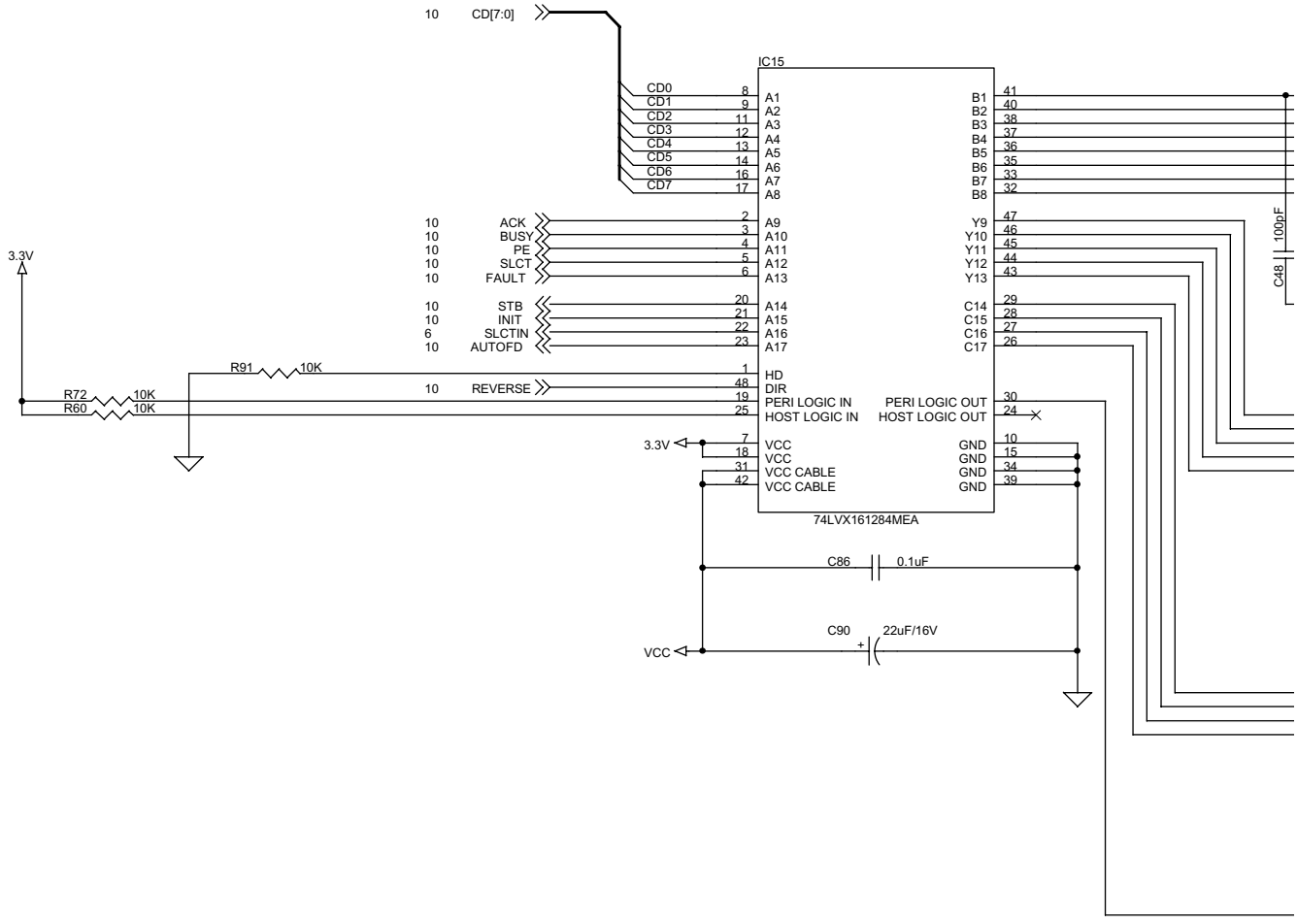


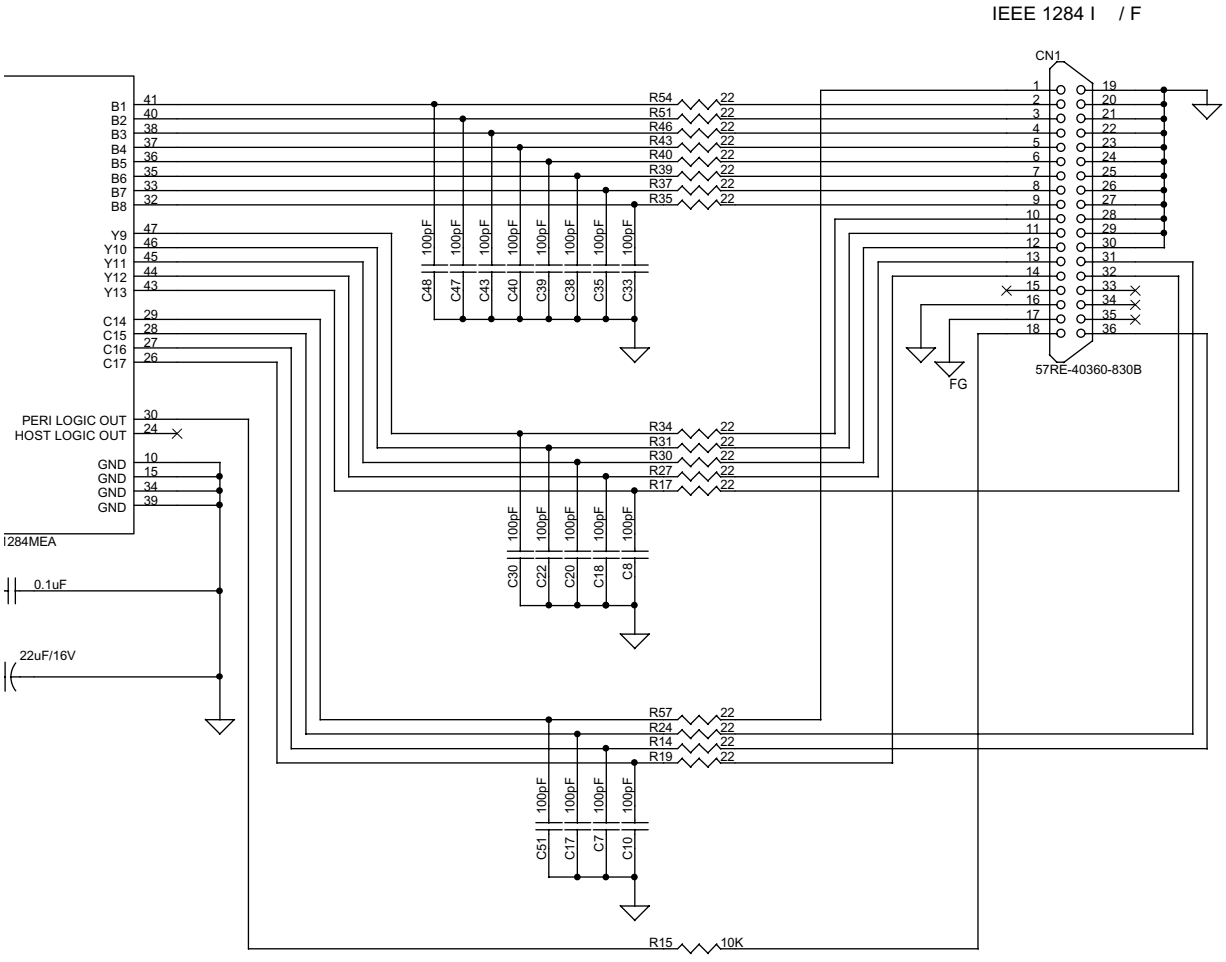
# [ENGINE I/F CN]


7,9,12,13 FVCCW
3.3V
NO ASM
R234
0
R233
0
R426
1K
NO ASM
R427
10K
NO ASM
FLASHB
19
3.3V VCC +12V +24V
CN13
22 RES_PCU
19 VIDEO1
10 PWM
DTC114YKA
Q4
PCU-VCCW
L <-> H
TS3B-SQ
JP7
9,10 MSW_MON
13,22 POF
3.3V
VCC
19 VIDEO0
R288 33
R289 33
C185 0.1uF
C95 47uF/16V
C167 47uF/16V
C138 47uF/16V NO ASM
C172 0.1uF
C180 47uF/16V
C168 47uF/16V
C148 100uF/35V NO ASM
C184 100pF NO ASM
C182 0.1uF
TX24-50R-LT-H1
13 GND1
VCC
R211 2.2K
R212 2.2K
R209 2.2K
R210 2.2K
C282 22pF NO ASM
C283 22pF NO ASM
C284 22pF NO ASM
C285 22pF NO ASM

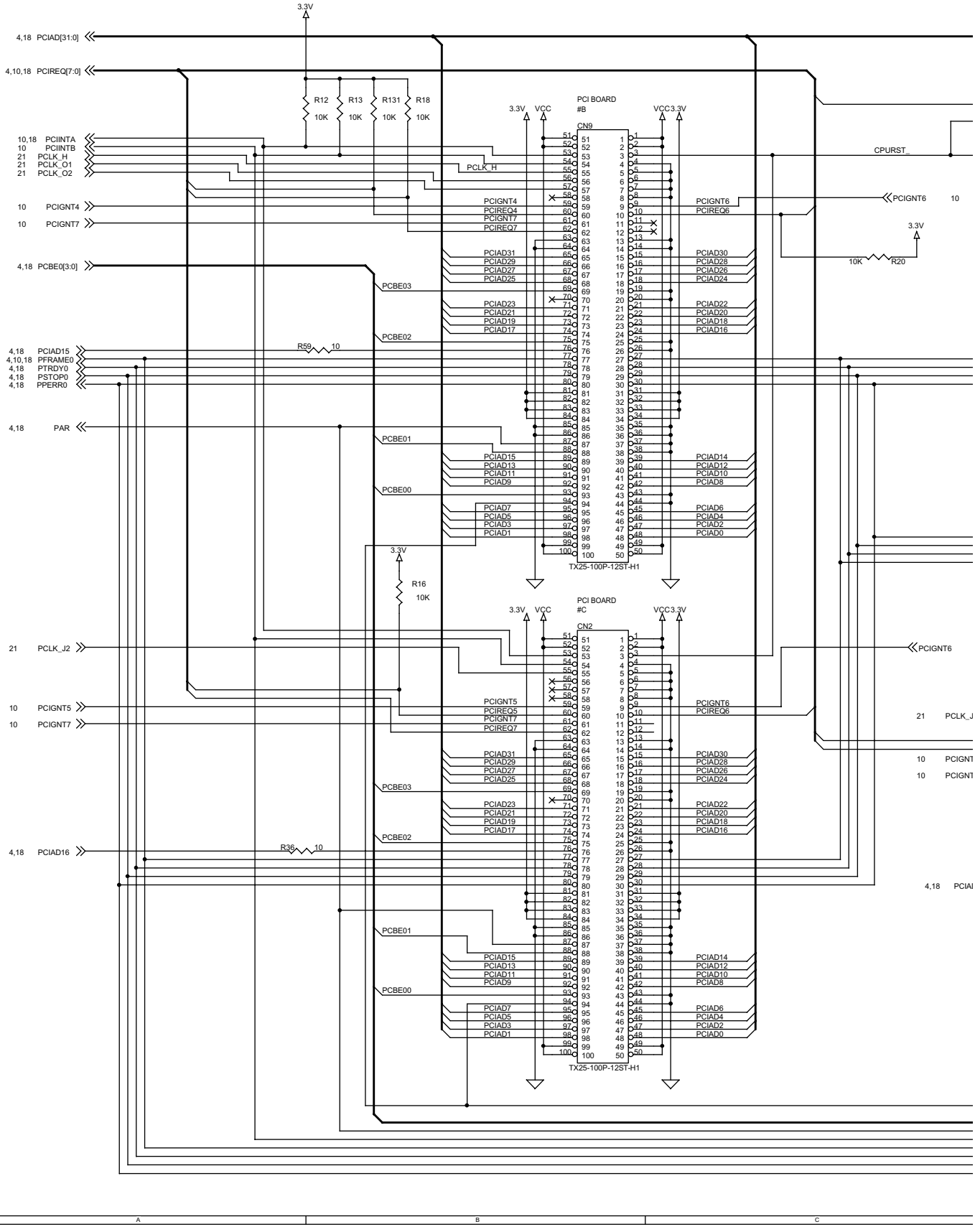

3.3V
VCC
+12V
+24V
CN13
TX24-50R-LT-H1
33
33
3.3V
VCC
R241 10K
R242 10K
R243 1K
R244 1K
R211 2.2K
R212 2.2K
R209 2.2K
R210 2.2K
IC41
IN1
IN2
IN3
IN4
IN5
IN6
IN7
COM-E
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
OUT7
TD62503F
DTR3
TXD3
RXD3
DSR3
DTEN
HSYNC
C284
22pF
NO ASM
C285
22pF
NO ASM
VCC
C192
0.1uF

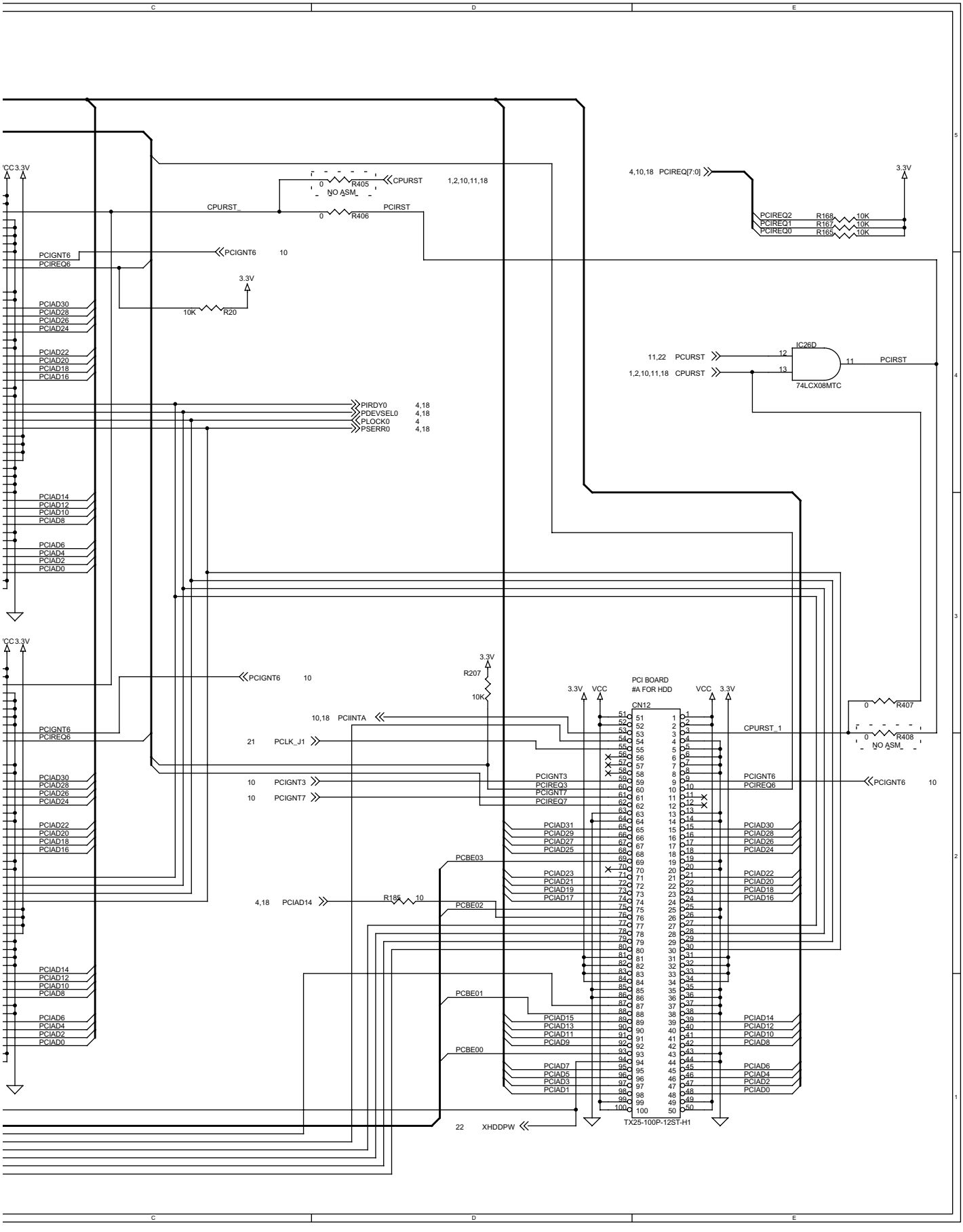
## [IEEE1284 I/F]

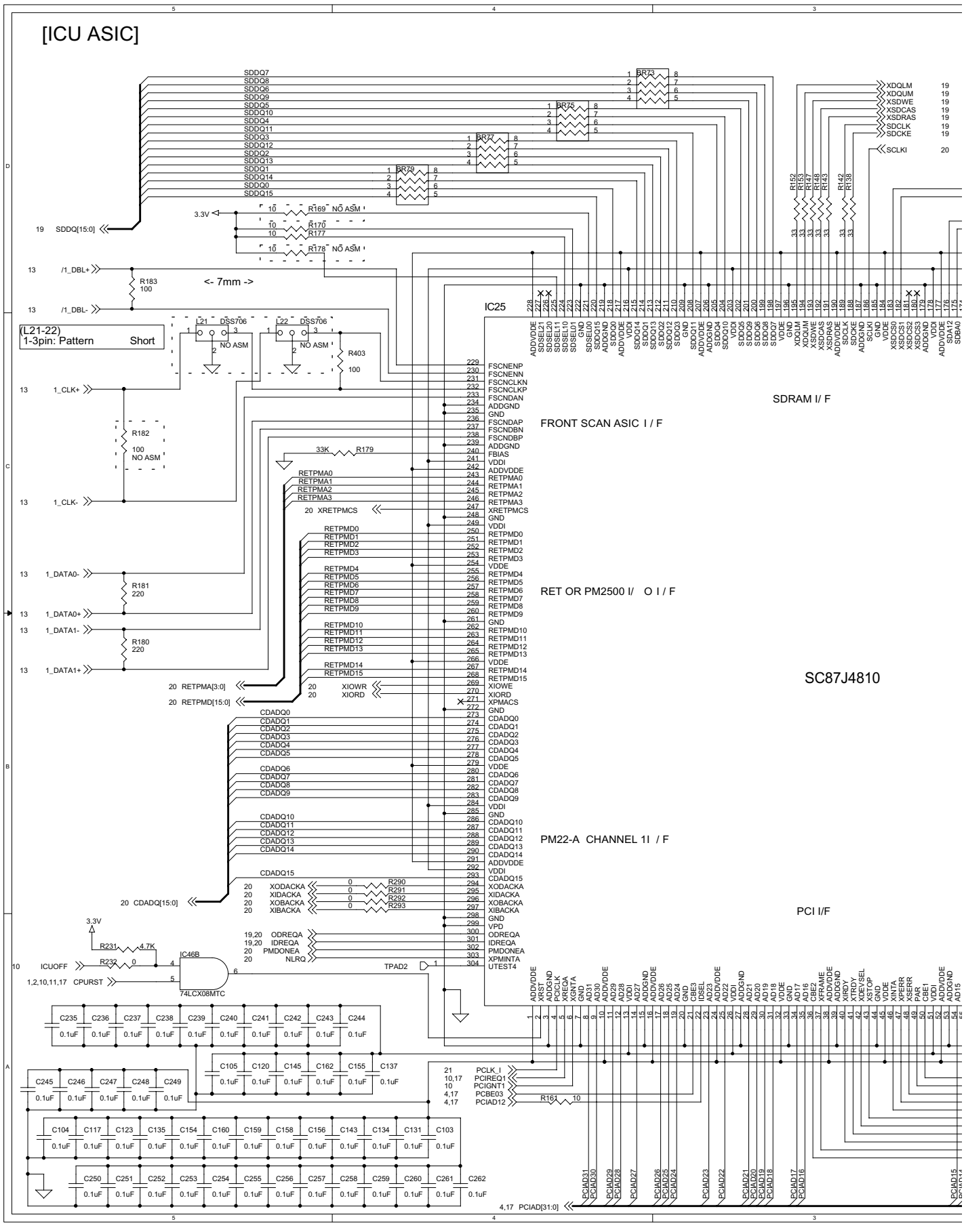

10 CD[7:0]
IC15
CD0 8 A1
CD1 9 A2
CD2 11 A3
CD3 12 A4
CD4 13 A5
CD5 14 A6
CD6 16 A7
CD7 17 A8
B1 41
B2 40
B3 38
B4 37
B5 36
B6 35
B7 33
B8 32
10 ACK 2 A9
10 BUSY 3 A10
10 PE 4 A11
10 SLCT 5 A12
10 FAULT 6 A13
Y9 47
Y10 46
Y11 45
Y12 44
Y13 43
C48 100pF
10 STB 20 A14
10 INIT 21 A15
6 SLCTIN 22 A16
10 AUTOFD 23 A17
C14 29
C15 28
C16 27
C17 26
3.3V
R91 10K
1 HD
10 REVERSE 48 DIR
R72 10K
R60 10K
19 PERI LOGIC IN
25 HOST LOGIC IN
PERI LOGIC OUT 30
HOST LOGIC OUT 24
3.3V
7 VCC
18 VCC
31 VCC CABLE
42 VCC CABLE
GND 10
GND 15
GND 34
GND 39
74LVX161284MEA
C86 0.1uF
C90 22uF/16V
VCC

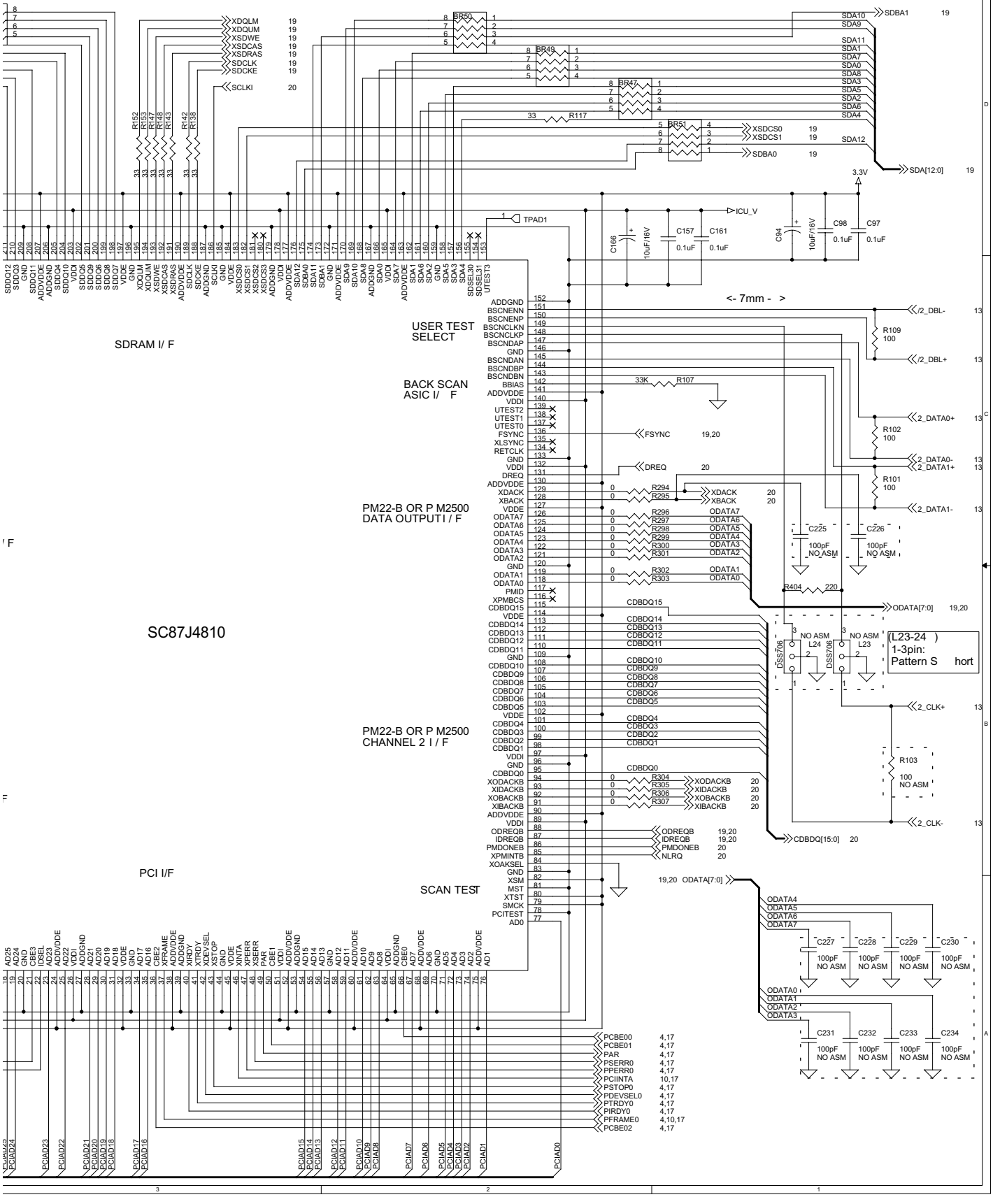

IEEE 1284 I / F
CN1
57RE-40360-830B
FG
B1 41
B2 40
B3 38
B4 37
B5 36
B6 35
B7 33
B8 32
Y9 47
Y10 46
Y11 45
Y12 44
Y13 43
C14 29
C15 28
C16 27
C17 26
PERI LOGIC OUT 30
HOST LOGIC OUT 24
GND 10
GND 15
GND 34
GND 39
I284MEA
0.1uF
22uF/16V
R54 22
R51 22
R46 22
R43 22
R40 22
R39 22
R37 22
R35 22
R34 22
R31 22
R30 22
R27 22
R17 22
R57 22
R24 22
R14 22
R19 22
R15 10K
100pF
C48 C47 C43 C40 C39 C38 C35 C33
C30 C22 C20 C18 C8
C51 C17 C7 C10

# [PCI BOARD CONNECTOR]

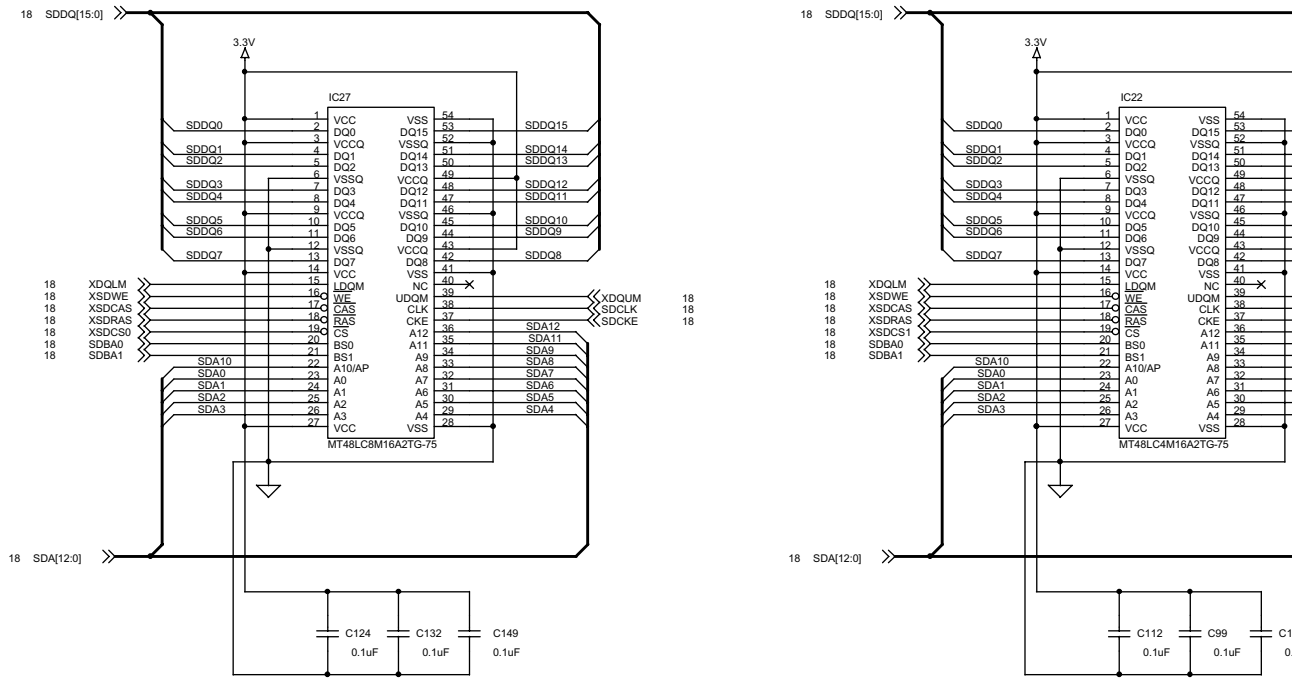


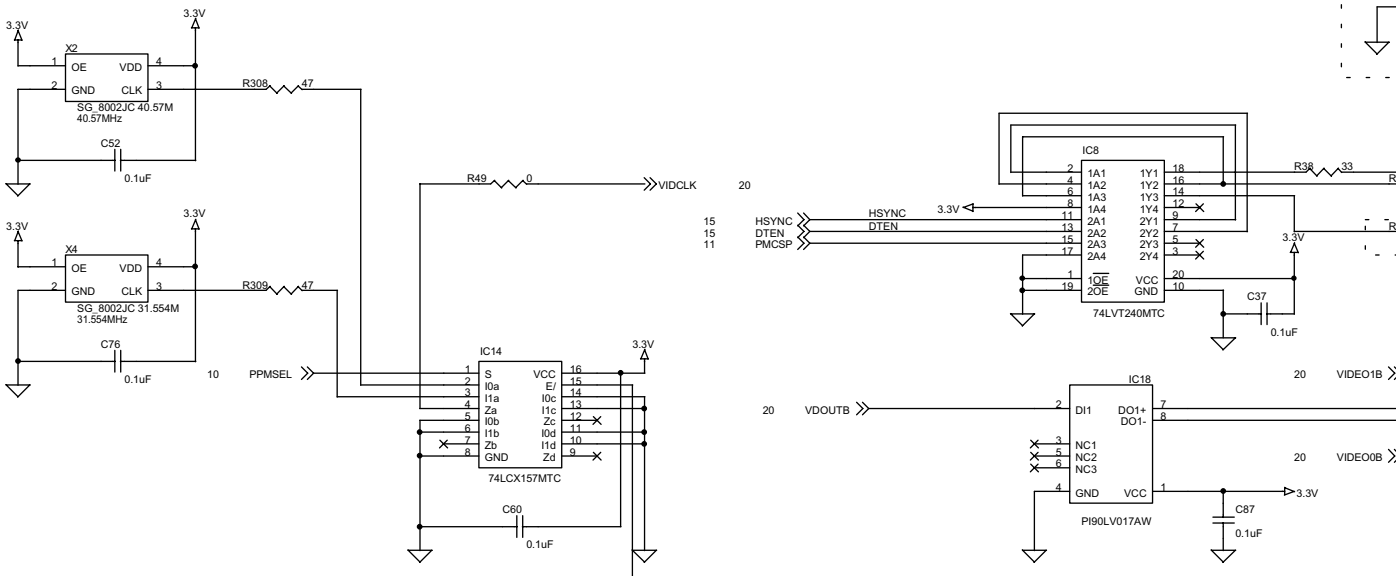

'CC 3.3V
R405
0
NO ASM
CPURST
1,2,10,11,18
CPURST_
R406
PCIRST
4,10,18 PCIREQ[7:0]
3.3V
PCIREQ2
PCIREQ1
PCIREQ0
R168
R167
R165
10K
PCIGNT6
PCIREQ6
10
PCIAD30
PCIAD28
PCIAD26
PCIAD24
PCIAD22
PCIAD20
PCIAD18
PCIAD16
R20
11,22 PCURST
1,2,10,11,18 CPURST
IC26D
74LCX08MTC
PIRDY0
PDEVSEL0
PLOCK0
PSERR0
4,18
PCIAD14
PCIAD12
PCIAD10
PCIAD8
PCIAD6
PCIAD4
PCIAD2
PCIAD0
R207
10K
10,18 PCIINTA
21 PCLK_J1
10 PCIGNT3
10 PCIGNT7
PCI BOARD
#A FOR HDD
CN12
VCC
PCIGNT3
PCIREQ3
PCIGNT7
PCIREQ7
PCIAD31
PCIAD29
PCIAD27
PCIAD25
PCIAD23
PCIAD21
PCIAD19
PCIAD17
PCIAD15
PCIAD13
PCIAD11
PCIAD9
PCIAD7
PCIAD5
PCIAD3
PCIAD1
PCBE03
PCBE02
PCBE01
PCBE00
4,18 PCIAD14
R185
22 XHDDPW
TX25-100P-12ST-H1
CPURST_1
R407
R408
NO ASM

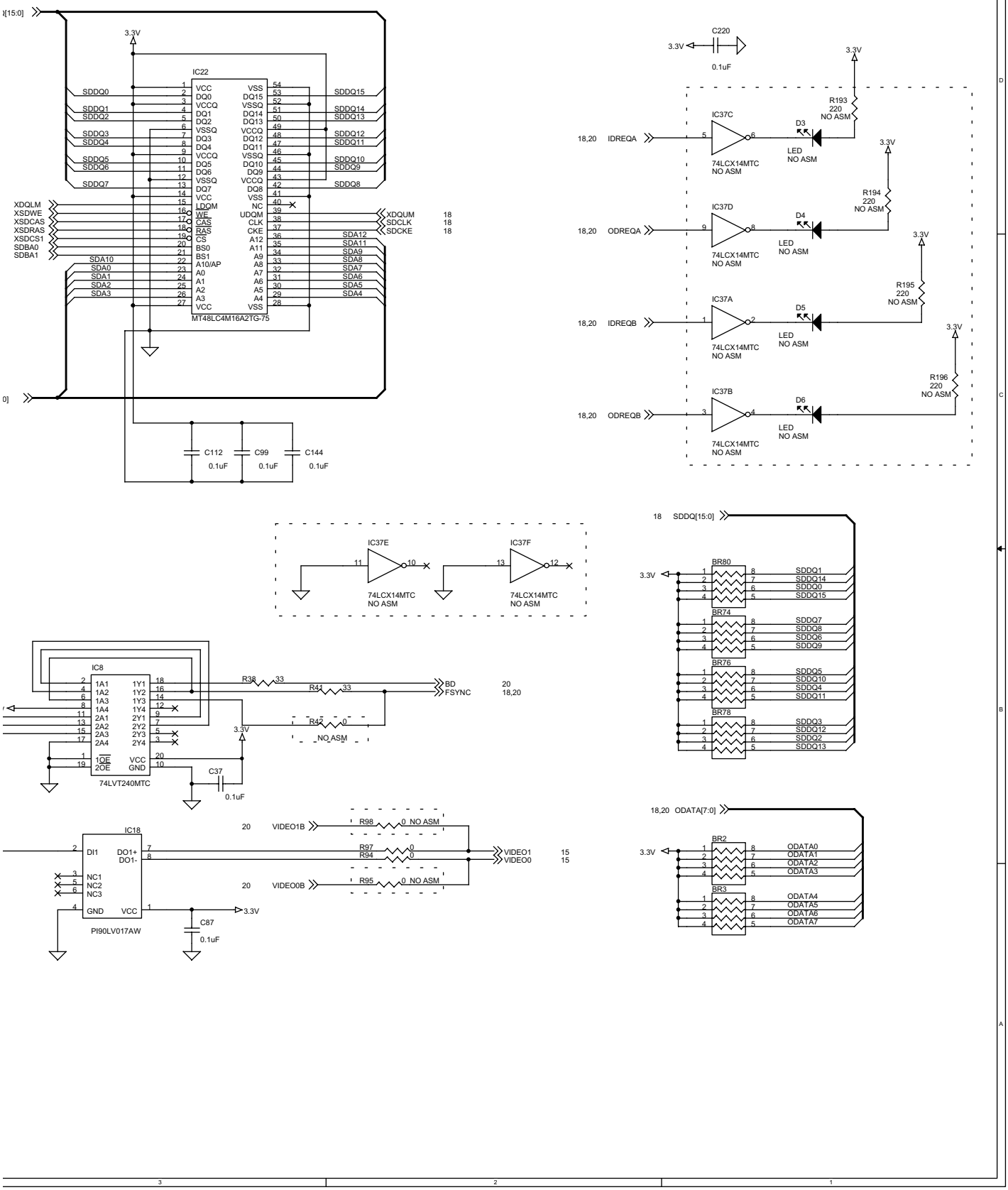

[ICU ASIC]
IC25
SC87J4810
FRONT SCAN ASIC I / F
RET OR PM2500 I/ O I / F
PM22-A CHANNEL 1I / F
SDRAM I/ F
PCI I/F
(L21-22)
1-3pin: Pattern Short
<- 7mm ->
NO ASM
74LCX08MTC

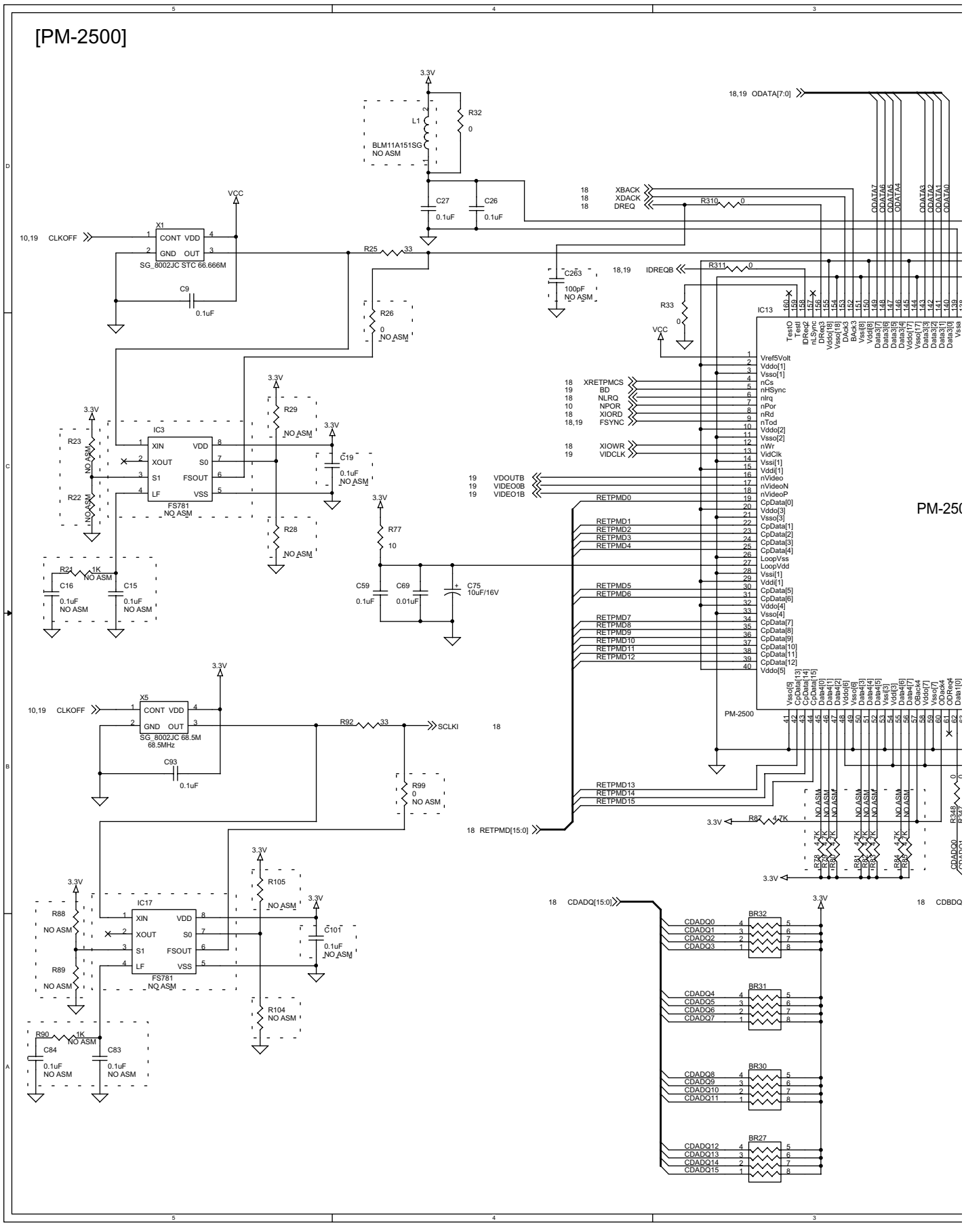

SDRAM I/ F
USER TEST SELECT
BACK SCAN ASIC I/ F
PM22-B OR P M2500 DATA OUTPUTI / F
SC87J4810
PM22-B OR P M2500 CHANNEL 2 I / F
PCI I/F
SCAN TEST
<- 7mm - >
(L23-24 ) 1-3pin: Pattern S hort
NO ASM
100pF NO ASM

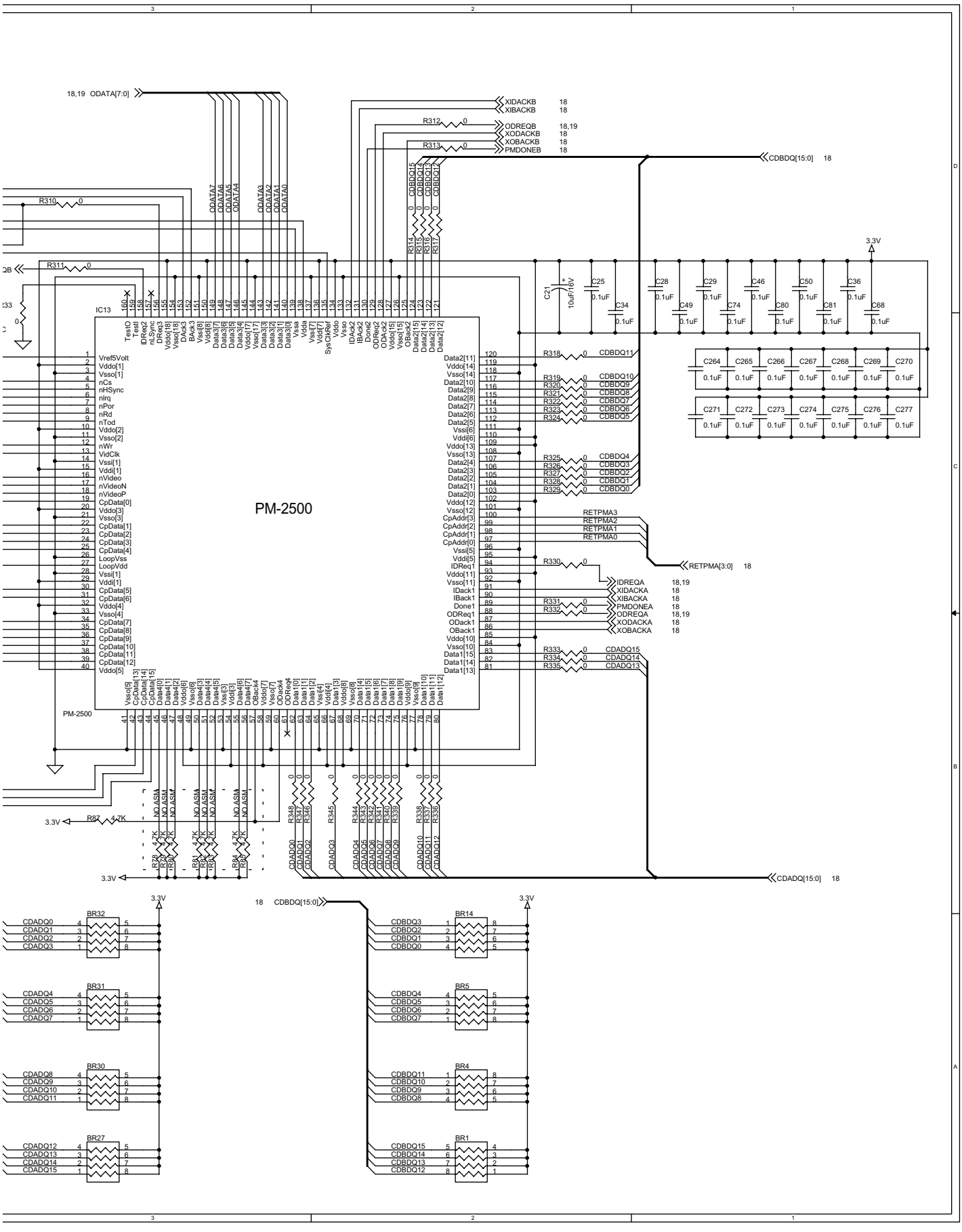
# [ICU SDRAM]


18 SDDQ[15:0]
3.3V
IC27
SDDQ0
SDDQ1
SDDQ2
SDDQ3
SDDQ4
SDDQ5
SDDQ6
SDDQ7
SDDQ15
SDDQ14
SDDQ13
SDDQ12
SDDQ11
SDDQ10
SDDQ9
SDDQ8
18 XDQLM
18 XSDWE
18 XSDCAS
18 XSDRAS
18 XSDCS0
18 SDBA0
18 SDBA1
SDA10
SDA0
SDA1
SDA2
SDA3
XDQUM 18
SDCLK 18
SDCKE 18
SDA12
SDA11
SDA9
SDA8
SDA7
SDA6
SDA5
SDA4
MT48LC8M16A2TG-75
18 SDA[12:0]
C124 0.1uF
C132 0.1uF
C149 0.1uF
IC22
MT48LC4M16A2TG-75
C112 0.1uF
C99 0.1uF

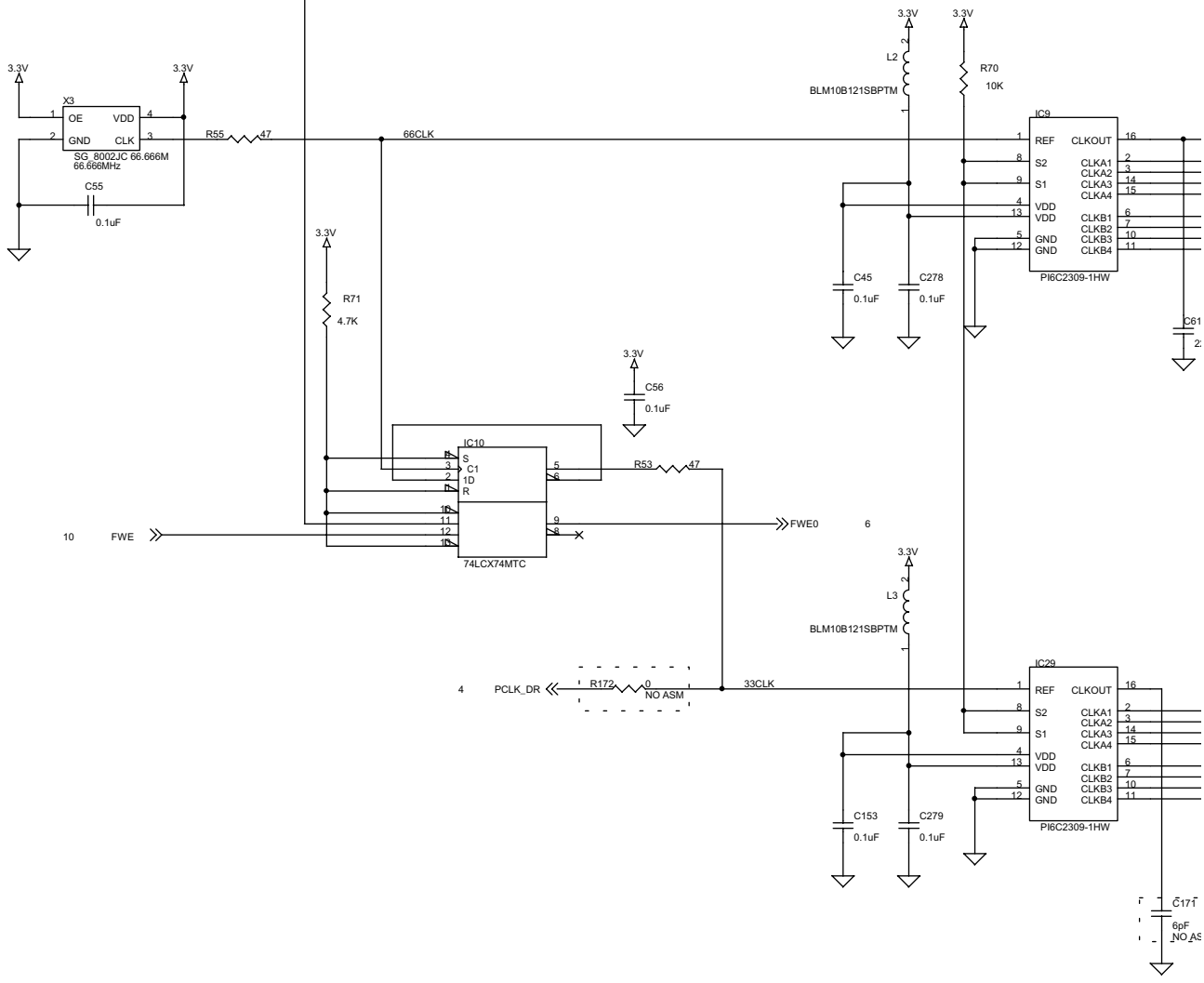

3.3V
X2
SG_8002JC 40.57M
40.57MHz
R308 47
C52 0.1uF
X4
SG_8002JC 31.554M
31.554MHz
R309 47
C76 0.1uF
10 PPMSEL
R49 0
VIDCLK 20
IC14
74LCX157MTC
C60 0.1uF
IC43F
10,20 CLKOFF
74LCX14MTC
IC8
74LVT240MTC
C37 0.1uF
15 HSYNC
15 DTEN
11 PMCSP
R38 33
IC18
PI90LV017AW
20 VDOUTB
20 VIDEO1B
20 VIDEO0B
C87 0.1uF
IC11D
IC11B
7 FLASHA
15 FLASHB
13 FLASHC
FLASHO 10
74LCX32MTC
C58 0.1uF

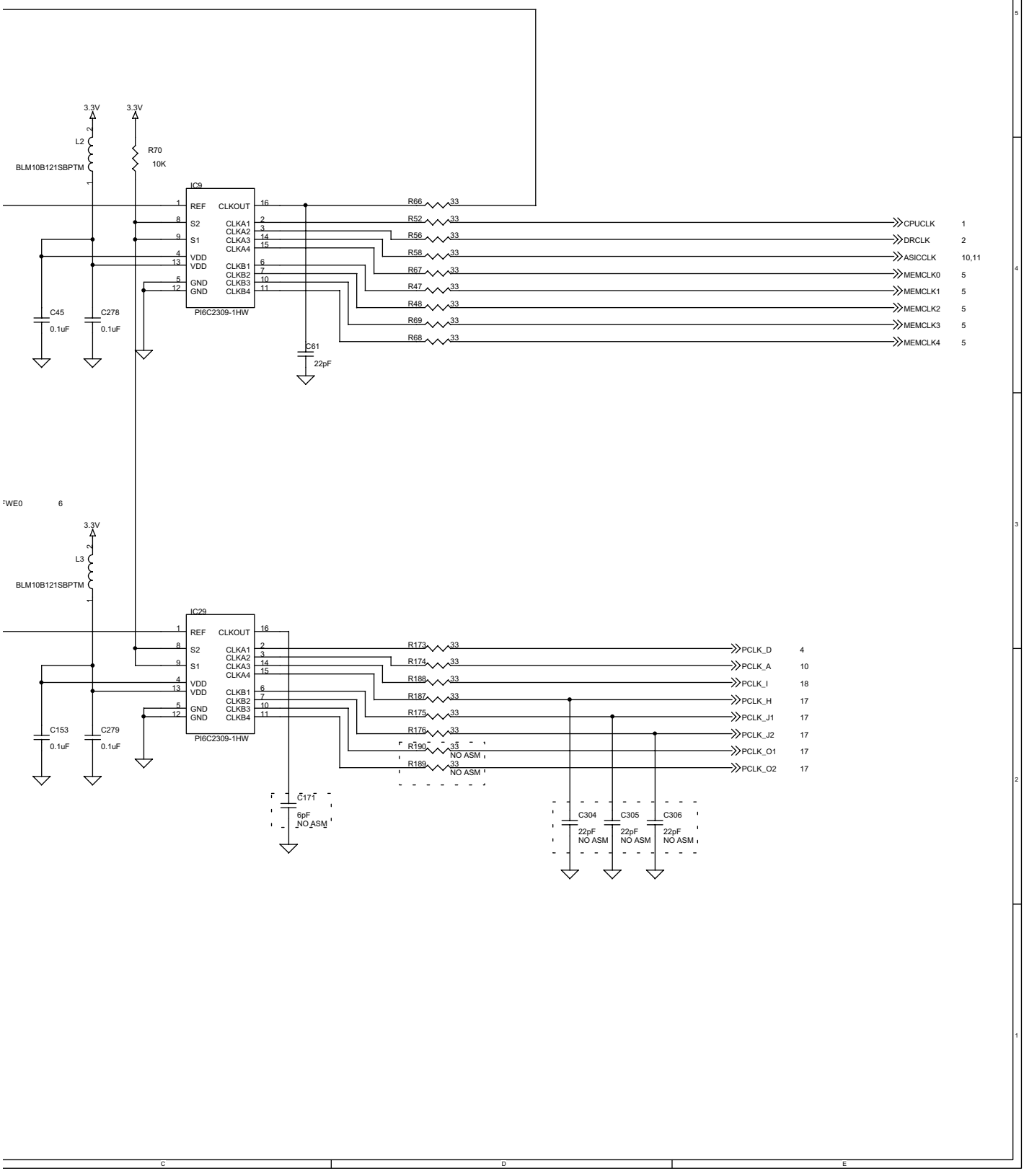

IC22
MT48LC4M16A2TG-75
3.3V
SDDQ0
SDDQ1
SDDQ2
SDDQ3
SDDQ4
SDDQ5
SDDQ6
SDDQ7
SDDQ15
SDDQ14
SDDQ13
SDDQ12
SDDQ11
SDDQ10
SDDQ9
SDDQ8
XDQLM
XSDWE
XSDCAS
XSDRAS
XSDCS1
SDBA0
SDBA1
SDA10
SDA0
SDA1
SDA2
SDA3
SDA12
SDA11
SDA9
SDA8
SDA7
SDA6
SDA5
SDA4
XDQUM 18
SDCLK 18
SDCKE 18
C112 0.1uF
C99 0.1uF
C144 0.1uF
C220 0.1uF
IC37C
IC37D
IC37A
IC37B
74LCX14MTC NO ASM
D3
D4
D5
D6
LED NO ASM
R193 220 NO ASM
R194 220 NO ASM
R195 220 NO ASM
R196 220 NO ASM
18,20 IDREQA
18,20 ODREQA
18,20 IDREQB
18,20 ODREQB
IC37E
IC37F
18 SDDQ[15:0]
BR80
BR74
BR76
BR78
SDDQ1
SDDQ14
SDDQ0
SDDQ15
SDDQ7
SDDQ8
SDDQ6
SDDQ9
SDDQ5
SDDQ10
SDDQ4
SDDQ11
SDDQ3
SDDQ12
SDDQ2
SDDQ13
IC8
74LVT240MTC
R38 33
R41 33
R42 0 NO ASM
BD 20
FSYNC 18,20
C37 0.1uF
IC18
PI90LV017AW
20 VIDEO1B
20 VIDEO0B
R98 0 NO ASM
R97 0
R94 0
R95 0 NO ASM
VIDEO1 15
VIDEO0 15
C87 0.1uF
18,20 ODATA[7:0]
BR2
BR3
ODATA0
ODATA1
ODATA2
ODATA3
ODATA4
ODATA5
ODATA6
ODATA7


[PM-2500]
PM-250
PM-2500
3.3V
VCC
L1
BLM11A151SG
NO ASM
R32
0
C27
0.1uF
C26
0.1uF
X1
CONT VDD
GND OUT
SG_8002JC STC 66.666M
10,19 CLKOFF
C9
0.1uF
R25
33
C263
100pF
NO ASM
18,19 IDREQB
R311
R310
18 XBACK
18 XDACK
18 DREQ
18,19 ODATA[7:0]
R33
R26
0
NO ASM
IC13
IC3
XIN
XOUT
S1
LF
VDD
S0
FSOUT
VSS
FS781
NO ASM
R23
R22
R29
R28
C19
0.1uF
NO ASM
R24
1K
NO ASM
C16
C15
0.1uF
NO ASM
R77
10
C59
0.1uF
C69
0.01uF
C75
10uF/16V
18 XRETPMCS
19 BD
18 NLRQ
10 NPOR
18 XIORD
18,19 FSYNC
18 XIOWR
19 VIDCLK
19 VDOUTB
19 VIDEO0B
19 VIDEO1B
RETPMD0
RETPMD1
RETPMD2
RETPMD3
RETPMD4
RETPMD5
RETPMD6
RETPMD7
RETPMD8
RETPMD9
RETPMD10
RETPMD11
RETPMD12
RETPMD13
RETPMD14
RETPMD15
18 RETPMD[15:0]
X5
10,19 CLKOFF
SG_8002JC 68.5M
68.5MHz
C93
0.1uF
R92
33
SCLKI
18
R99
0
NO ASM
R87
4.7K
IC17
R88
R89
R105
R104
C101
0.1uF
NO ASM
R90
1K
NO ASM
C84
C83
0.1uF
NO ASM
18 CDADQ[15:0]
BR32
BR31
BR30
BR27
CDADQ0
CDADQ1
CDADQ2
CDADQ3
CDADQ4
CDADQ5
CDADQ6
CDADQ7
CDADQ8
CDADQ9
CDADQ10
CDADQ11
CDADQ12
CDADQ13
CDADQ14
CDADQ15
18 CDBDQ

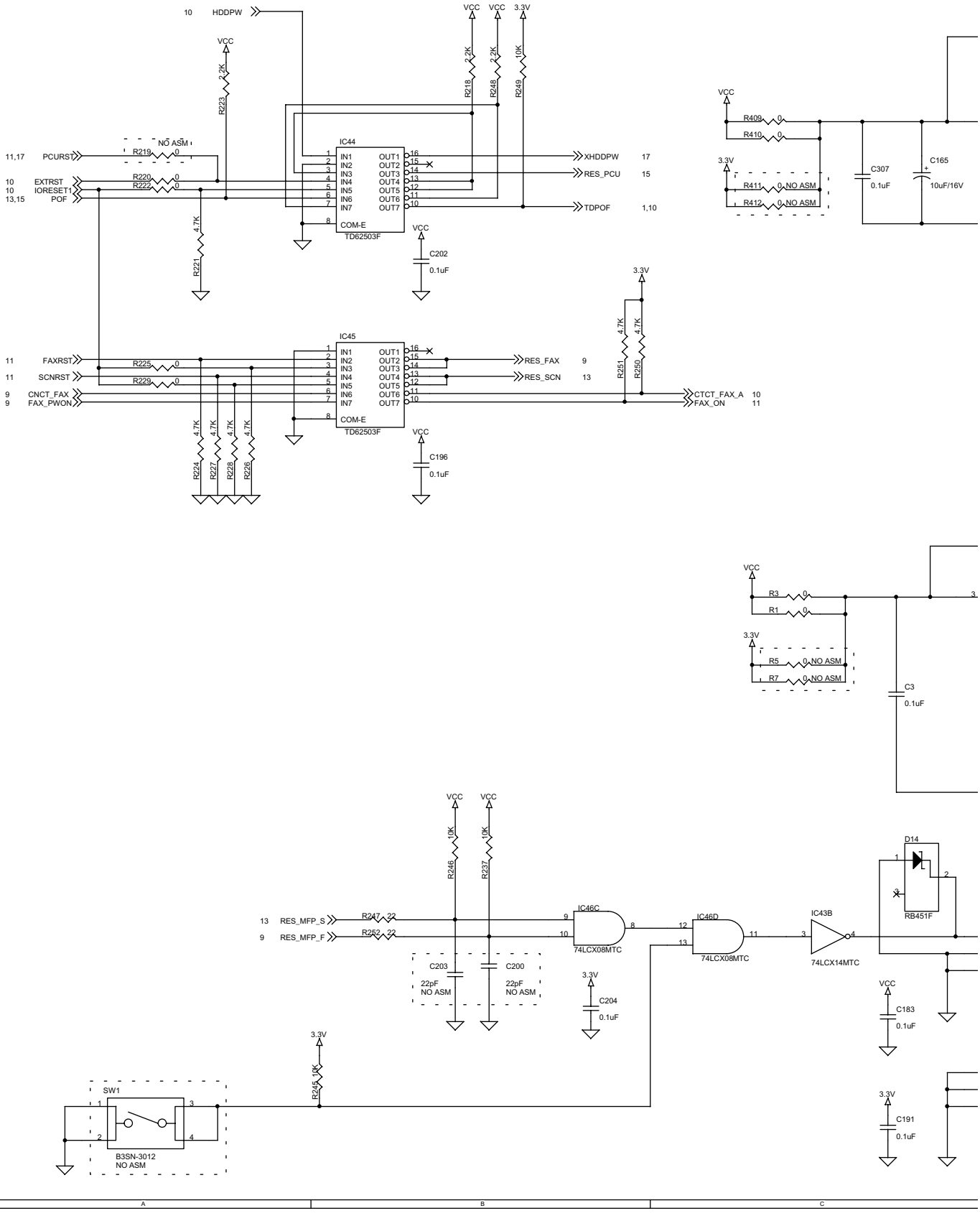

PM-2500
IC13
18,19 ODATA[7:0]
CDBDQ[15:0] 18
CDADQ[15:0] 18
RETPMA[3:0] 18
3.3V
XIDACKB 18
XIBACKB 18
ODREQB 18,19
XODACKB 18
XOBACKB 18
PMDONEB 18
IDREQA 18,19
XIDACKA 18
XIBACKA 18
PMDONEA 18
ODREQA 18,19
XODACKA 18
XOBACKA 18
BR32
BR31
BR30
BR27
BR14
BR5
BR4
BR1

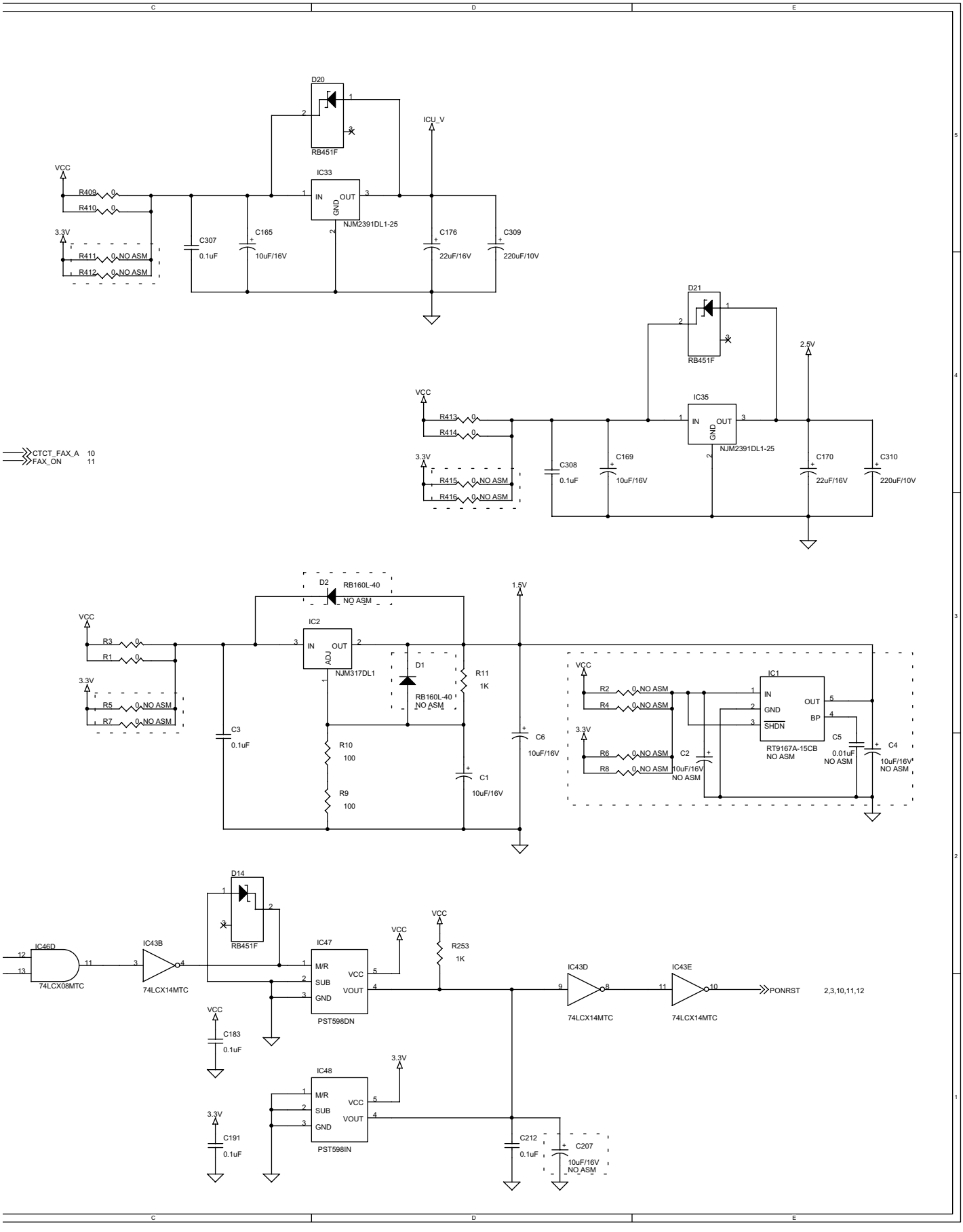
# [CLOCK]


3.3V
X3
OE
VDD
GND
CLK
SG_8002JC 66.666M
66.666MHz
C55
0.1uF
R55
47
66CLK
L2
BLM10B121SBPTM
R70
10K
IC9
REF
CLKOUT
S2
S1
VDD
GND
CLKA1
CLKA2
CLKA3
CLKA4
CLKB1
CLKB2
CLKB3
CLKB4
PI6C2309-1HW
C45
C278
C61
R71
4.7K
C56
IC10
S
C1
1D
R
74LCX74MTC
R53
FWE
FWE0
L3
PCLK_DR
R172
NO ASM
33CLK
C153
C279
C171
6pF


3.3V
3.3V
L2
BLM10B121SBPTM
R70
10K
IC9
REF
CLKOUT
S2
CLKA1
CLKA2
S1
CLKA3
CLKA4
VDD
VDD
CLKB1
CLKB2
GND
CLKB3
GND
CLKB4
PI6C2309-1HW
C45
0.1uF
C278
0.1uF
C61
22pF
R66 33
R52 33
R56 33
R58 33
R67 33
R47 33
R48 33
R69 33
R68 33
CPUCLK 1
DRCLK 2
ASICCLK 10,11
MEMCLK0 5
MEMCLK1 5
MEMCLK2 5
MEMCLK3 5
MEMCLK4 5
WE0 6
3.3V
L3
BLM10B121SBPTM
IC29
PI6C2309-1HW
C153
0.1uF
C279
0.1uF
C171
6pF
NO ASM
C304
22pF
NO ASM
C305
22pF
NO ASM
C306
22pF
NO ASM
R173 33
R174 33
R188 33
R187 33
R175 33
R176 33
R190 33
NO ASM
R189 33
NO ASM
PCLK_D 4
PCLK_A 10
PCLK_I 18
PCLK_H 17
PCLK_J1 17
PCLK_J2 17
PCLK_O1 17
PCLK_O2 17

# [RESET / POWER]


10 HDDPW
VCC
2.2K
R223
R218
R248
R249
10K
IC44
11,17 PCURST
10 EXTRST
10 IORESET
13,15 POF
R219 NO ASM
R220
R222
4.7K
R221
C202
0.1uF
XHDDPW 17
RES_PCU 15
TDPOF 1,10
TD62503F
R409
R410
R411 NO ASM
R412 NO ASM
C307
0.1uF
C165
10uF/16V
3.3V
IC45
11 FAXRST
11 SCNRST
9 CNCT_FAX
9 FAX_PWON
R225
R229
R224
R227
R228
R226
C196
RES_FAX 9
RES_SCN 13
R251
R250
CTCT_FAX_A 10
FAX_ON 11
R3
R1
R5 NO ASM
R7 NO ASM
C3
0.1uF
R246
R237
13 RES_MFP_S
9 RES_MFP_F
R247 22
R252 22
C203
22pF
NO ASM
C200
22pF
NO ASM
C204
IC46C
74LCX08MTC
IC46D
74LCX08MTC
IC43B
74LCX14MTC
D14
RB451F
C183
C191
SW1
R245
B3SN-3012
NO ASM


D20
RB451F
ICU_V
VCC
R409 0
R410 0
IC33
IN
OUT
GND
NJM2391DL1-25
3.3V
R411 0 NO ASM
R412 0 NO ASM
C307
0.1uF
C165
10uF/16V
C176
22uF/16V
C309
220uF/10V
D21
RB451F
2.5V
VCC
R413 0
R414 0
IC35
IN
OUT
GND
NJM2391DL1-25
3.3V
R415 0 NO ASM
R416 0 NO ASM
C308
0.1uF
C169
10uF/16V
C170
22uF/16V
C310
220uF/10V
CTCT_FAX_A 10
FAX_ON 11
D2
RB160L-40
NO ASM
1.5V
VCC
R3 0
R1 0
IC2
IN
OUT
ADJ
NJM317DL1
3.3V
R5 0 NO ASM
R7 0 NO ASM
D1
RB160L-40
NO ASM
R11
1K
C3
0.1uF
R10
100
R9
100
C1
10uF/16V
C6
10uF/16V
VCC
R2 0 NO ASM
R4 0 NO ASM
IC1
IN
GND
SHDN
OUT
BP
RT9167A-15CB
NO ASM
3.3V
R6 0 NO ASM
R8 0 NO ASM
C2
10uF/16V
NO ASM
C5
0.01uF
NO ASM
C4
10uF/16V
NO ASM
D14
RB451F
IC46D
74LCX08MTC
IC43B
74LCX14MTC
IC47
M/R
SUB
GND
VCC
VOUT
PST598DN
VCC
R253
1K
IC43D
74LCX14MTC
IC43E
74LCX14MTC
PONRST
2,3,10,11,12
VCC
C183
0.1uF
IC48
M/R
SUB
GND
VCC
VOUT
PST598IN
3.3V
C191
0.1uF
C212
0.1uF
C207
10uF/16V
NO ASM

## CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

## CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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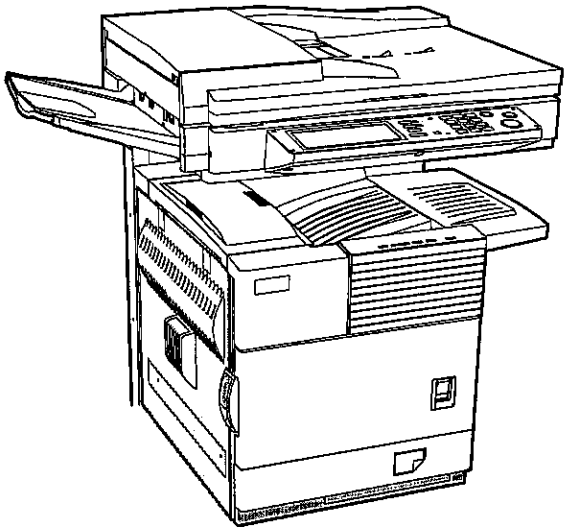
2002 February Printed in Japan (N)

# SHARP PARTS GUIDE

CODE:00ZM450NU/P1E



## LASER PRINTER (MULTI FUNCTION)

# MODEL AR-M350N AR-M350U AR-M450N AR-M450U

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2 Left door unit
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8 Delivery turn over unit
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11 DV unit
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18 PCU PWB unit
20 Mother board
26 MFP Control PWB (ARM350N/M450N)
27 STD control PWB (ARM350U/M450U)
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The AR-M350N/M350U/M450N/M450U Parts Guide describes only the parts change from AR-P350/AR-P450 Parts Guide. for the common parts, please refer to the AR-P350/AR-P450(CODE :00ZAR350LPP1/) Parts Guide.


SHARP CORPORATION



This document has been published to be used for after sales service only.
The contents are subject to change without once.

## DEFINITION

The definition of each Rank is as follows and also noted in the list

A: Parts necessary to be stocked as High usage parts.
B: Parts necessary to be stocked as Standard usage parts.
C: Low usage parts.
D: Parts necessary for refurbish.
E: Unit parts recommended to be stocked for efficient after sales service.
Please note that the lead time for the said parts may be longer than normal parts.
S: Consumable parts.

Please note that the following parts used in Copier under the same description are classified into A or B Rank depending upon the place used.

Example: Gear made of Metal, Sprocket, Bearing, Belt made of Rubber, Spring clutch mechanism.

ARank : The parts which may be with the revolution or loading.

BRank : Parts similar to A Rank parts, but are not included in Rank A.

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

○ Other than this Parts Guide, please refer to documents Service Manual (including Circuit Diagram) of this model.
○ Please use the 13 digit code described in the right hand corner of front cover of the document, when you place an order.
○ For U.S. only-Use order codes provided in advertising literature. Do not order from parts department.

[Note] *These parts are supplied by SMF.

---

## 1 Exteriors

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 5 | GCAB-0940FCZ2 | BA | | D | Delivery tray cabinet |
| 11 | HPNLC0243FCZ1 | AP | | D | Ope.cabinet |
| 26 | CPNLH0020QS37 | AK | N | D | Model panel (ARM350U) |
| | CPNLH0020QS38 | AK | N | D | Model panel (ARM450U) |
| | CPNLH0020QS39 | AK | N | D | Model panel (ARM350N) |
| | CPNLH0020QS40 | AK | N | D | Model panel (ARM450N) |
| | | | | | |
| | | | | | |

## 2 Left door unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 3 | LX-BZ0147FCZ1 | AC | | C | Screw |
| 9 | PTME-0287FCZ1 | AD | | C | Transfer look pawl |
| 13 | LANGT1407FCZ2 | AR | | C | ACC fixing angle |
| 16 | PTME-0279FCZ1 | AB | | C | Left door look pawl |
| 27 | NFANP0069FCZZ | AV | | B | Fan(CFM1N) |
| | | | | | |
| | | | | | |

## 3 PS roller unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 38 | LX-BZ0589FCZ1 | AA | | C | Screw |
| | | | | | |
| | | | | | |

## 4 TC unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 25 | LX-BZ0670FCZ1 | AC | | C | Screw |
| 67 | LX-BZ0788FCZ1 | AC | | C | Screw |
| 71 | NSFTZ2576FCZ1 | AL | | C | PS roller shaft |
| | | | | | |
| | | | | | |

## 7 Fusing unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 3 | PTME-0282FCZ1 | AH | | C | Upper separator pawl |
| | | | | | |
| | | | | | |
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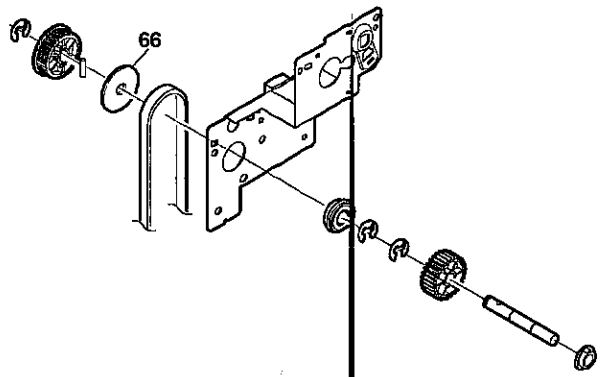
## 8 Delivery turn over unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 5 | NFANP0069FCZZ | AV | | B | Fan(CFM1N) |
| 10 | PGIDM1896FCZ1 | AV | | C | Delivery upper guide |
| 14 | LDAiU0626FCZ2 | AK | | C | Paper exit follower roller fixing plate |
| 38 | NBLTH0327FCZ1 | AL | | B | Belt(S3M-BELT-573) |
| 47 | NBLTH0350FCZ1 | AH | | B | Belt(S3M-BELT-252) |
| 62 | PBRSS0208FCZ1 | AH | | C | Discharge brush |
| 66 | PSHEP4962FCZ1 | AC | | C | Belt holder sheet |
| | | | | | |
| | | | | | |

## 8 Delivery turn over unit

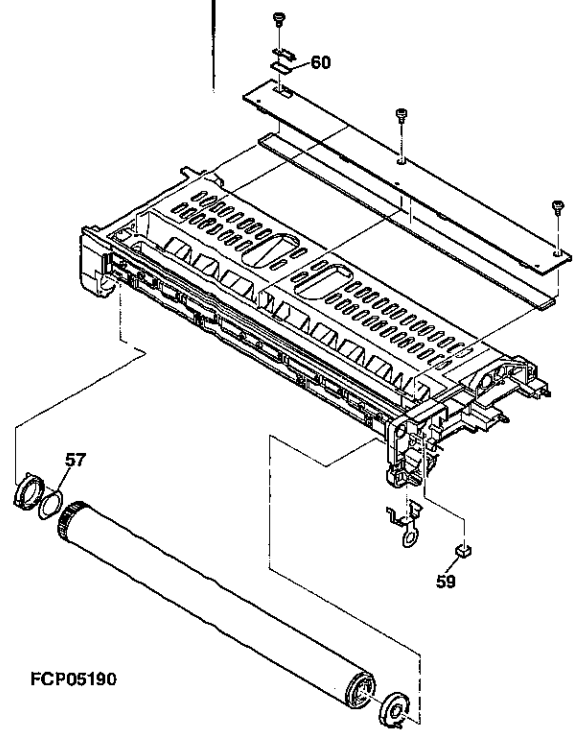



FCP05189

## 10 Process unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 16 | MSPRC3010FCZ1 | AB | | C | Spring |
| 24 | XBBSD30P08000 | AA | | C | Screw(3x8) |
| 26 | LX-BZ0656FCZ1 | AE | N | C | Screw |
| 47 | MSPRC2954FCZ1 | AA | | C | Spring |
| 48 | PMLT-1238FCZ1 | AC | | C | Toner shield cushion |
| 57 | LX-WZ0440FCZZ | AC | | C | Spacer |
| 59 | PSPAZ1431FCZZ | AA | | C | Spacer A |
| 60 | PSPAZ1432FCZZ | AA | | C | Spacer B |
| | | | | | |
| | | | | | |

## 10 Process unit

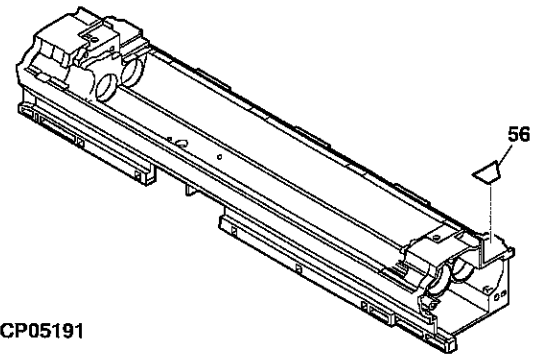



FCP05190

## 11 DV unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 29 | LPLTM6022FCZZ | AC | | C | M4 plate |
| 48 | PMLT-1241FCZ1 | AA | | C | DV BOX cushion |
| 49 | PMLT-1244FCZ1 | AC | | C | Docter cushion |
| 56 | PMLT-1296FCZZ | AH | | C | Shutter cushion |
| | | | | | |
| | | | | | |

## 11 DV unit

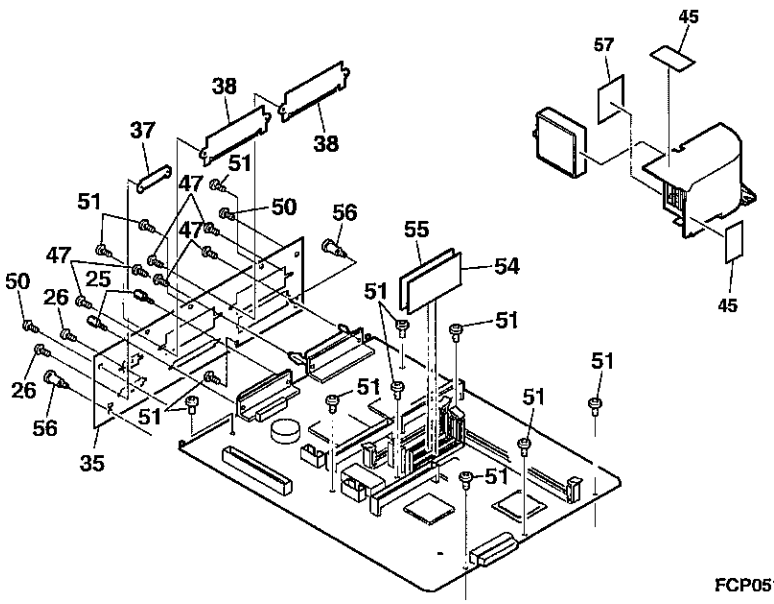



FCP05191

## 12 Controller BOX unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | PDUC-0165FCZ1 | AF | | C | Controller duct |
| 5 | NFANP0069FCZZ | AV | | B | Fan(CFM1N) |
| 9 | PCOVP1555FCZ1 | AE | | C | Controller BOX cover |
| 14 | QCNW-0201FCZZ | AG | | C | Printer I/F FFC |
| 25 | LX-BZ0921FCZ1 | AE | | C | Screw(3x6) |
| 26 | XBPSD26P06000 | AA | | C | Screw(2.6x6) |
| 35 | LPLTM5765FCZ1 | AH | | C | Control PWB joint plate |
| 37 | PCOVP1560FCZZ | AC | | C | FAX I/F cover |
| 38 | PCOVP1557FCZZ | AC | | C | LAN/Option cover |
| 45 | PSHEP4945FCZZ | AC | | C | Controller duct sheet B |
| 47 | XBPSD30P06000 | AA | | C | Screw(3x6) |
| 50 | XHBSE30P06000 | AA | | C | Screw(3x6) |
| 51 | XBBSD30P06000 | AA | | C | Screw(3x6) |
| 54 | VHi28F322L03F | BU | N | B | MFP FLASH ROM A EX (ARM350N/M450N) |
| | VHi28F322L15F | BU | N | B | STD FLASH ROM A EX (ARM350U/M450U) |
| 55 | VHi28F322L04F | BU | N | B | MFP FLASH ROM B EX (ARM350N/M450N) |
| | VHi28F322L16F | BU | N | B | STD FLASH ROM B EX (ARM350U/M450U) |
| 56 | LX-BZ0828FCZZ | AD | | C | Screw |
| 57 | PSHEP5009FCZZ | AC | | C | Controller duct sheet C |
| | | | | | |
| | | | | | |

## 12 Controller BOX unit

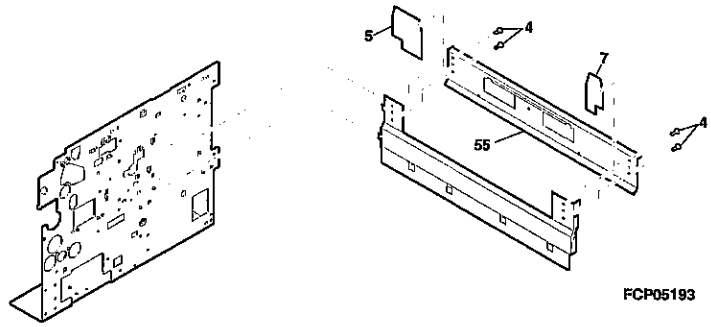



FCP05192

## 14 Rear frame section 1

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | NFANP0069FCZZ | AV | | B | Fan(CFM1N) |
| 4 | XHBSE40P08000 | AA | | C | Screw(4×8) |
| 5 | PSHEZ4874FCZ1 | AC | | C | LSU cleaning sheet R |
| 7 | PSHEZ4873FCZ1 | AC | | C | LSU cleaning sheet F |
| 37 | PSHEZ4885FCZ1 | AB | | C | Paper feed base sheet RN |
| 55 | PCOVP1693FCZZ | AH | | C | Duct support cover |
| | | | | | |

## 14 Rear frame section 1




FCP05193

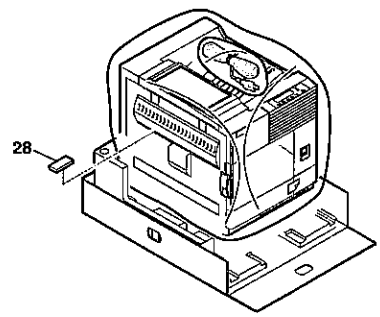
## 15 Rear frame section 2

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 54 | QCNW-0205FCZZ | AC | | C | HV I/F FFC |
| 55 | QCNW-0204FCZZ | AC | | C | Drum motor I/F FFC |
| 56 | QCNW-0203FCZZ | AD | | C | Main motor I/F FFC |
| 58 | VHi28F081L04F | BE | N | B | PCU FLASH ROM |
| | | | | | |

## 17 Packing material & Accessories

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 5 | SPAKC6122DS37 | AU | N | D | Packing case | (ARM350U) |
| | SPAKC6122DS38 | AU | N | D | Packing case | (ARM450U) |
| | SPAKC6122DS39 | AU | N | D | Packing case | (ARM350N) |
| | SPAKC6122DS40 | AU | N | D | Packing case | (ARM450N) |
| 6 | TCADZ1521FCZ1 | AE | | D | Fusing pressurization manual | |
| 12 | CDSKA0005FC37 | AL | | D | Printer CD | |
| 13 | PSHEP4927FCZ1 | AR | | D | Key sheet MFP | |
| * | TiNSE2061GHZZ | AZ | N | D | Operation manual PRT | (German) |
| * | TiNSG2060GHZZ | AZ | N | D | Operation manual PRT | (U Kingdom) |
| | TiNSE2077FCZZ | AQ | N | D | Operation manual COPY | (USA) |
| * | TiNSE2081GHZZ | AR | N | D | Operation manual COPY | (German) |
| * | TiNSG2080GHZZ | AR | N | D | Operation manual COPY | (U Kingdom) |
| | TiNSE2078FCZZ | AW | N | D | Operation manual COPY | (English) |
| | TiNSE2119FCZZ | AN | N | D | Operation manual SCANNER | (USA) |
| * | TiNSE2123GHZZ | AP | N | D | Operation manual SCANNER | (German) |
| * | TiNSG2122GHZZ | AP | N | D | Operation manual SCANNER | (U Kingdom) |
| 20 | TiNSE2120FCZZ | AV | N | D | Operation manual SCANNER | (English) |
| | TiNSE2214FCZZ | AG | N | D | Operation manual Sub | (USA) |
| * | TiNSE2218GHZZ | AC | N | D | Operation manual Sub | (German) |
| * | TiNSG2217GHZZ | AC | N | D | Operation manual Sub | (U Kingdom) |
| | TiNSE2215FCZZ | AG | N | D | Operation manual Sub | (English) |
| | TiNSE2237FCZZ | AH | N | D | Operation manual | (USA) |
| * | TiNSE2241GHZZ | AF | N | D | Operation manual | (German) |
| * | TiNSG2240GHZZ | AF | N | D | Operation manual | (U Kingdom) |
| | TiNSE2238FCZZ | AH | N | D | Operation manual | (English) |
| 28 | SPAKA6272FCZZ | AG | N | D | Fusing protect add R | |
| | | | | | | |

## 17 Packing material & Accessories




FCP05194

## 18 PCU PWB unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 54 | VHiFS781BZB-1 | AP | | B | IC(FS781BZB) [IC13] |
| | | | | | |
| | | | | | |

## 20 Mother board

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 9 | VRS-RE3LA6R2J | AC | | C | Resistor(3W 6.2Ω ±5%) |
| | | | | | |
| | | | | | |

## 26 MFP Control PWB (ARM350N/M450N)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | PCAPH0010GCZZ | AD | | C | Jumper cap(JM-2W-96) [JP2,3,4,5,6,7] |
| 2 | PCOVP1468FCZZ | AD | | C | Battery cover |
| 3 | QCNCM1183FCZZ | AM | | C | Connector(100P15.2JXK) [CN2,12] |
| 4 | QCNCM1146FCZZ | AE | | C | Connector(9A12-1034) [CN14] |
| 5 | QCNCM1182FCZZ | AM | | C | Connector(100P9.2JXKS) [CN16] |
| 6 | QCNCW0946FCZZ | AH | | C | Connector(36pin) [CN1] |
| 7 | QCNCW1147FCZZ | AL | | C | Connector(TX2450RLTH1) [CN13] |
| 8 | QCNCW1149FCZZ | AN | | C | Connector(8AL068S305C) [CN8] |
| ⚠ 9 | QFS-D132CQCZZ | AG | | A | Fuse(1.25/250T) [F1] |
| 10 | QFSHB0028FCZZ | AC | | C | Fuse holder(TP00351-31) [F1] |
| 11 | QPiN-0003GCZZ | AC | | C | Pin(T3B-SQ) [JP2,3,4,5,6,7] |
| 12 | QSOCZ0001QSZZ | AL | | C | Socket(DMM168-FLAA2-3A133) [CN3] |
| 13 | QSOCZ0073FCNA | AL | | C | Connector(DMM2SD72A11) [CN4,5,6] |
| 14 | QSOCZ6428ACZZ | AE | | C | IC socket(28pin) [IC36] |
| 15 | RCRSP6676RCZZ | AG | | B | Crystal(32.768KHz) [X6] |
| 16 | RCRUA0005FCZZ | AP | | B | Crystal(14.745KHz) [X7] |
| 17 | RCRUA0007FCZZ | AP | | B | Crystal(31.554MHz) [X4] |
| 18 | RCRUA0008FCZZ | AP | | B | Crystal(40.57MHz) [X2] |
| 19 | RCRUA0009FCZZ | AP | | B | Crystal(66.666MHZ) [X3] |
| 20 | RCRUA0012FCZZ | AP | | B | Crystal(66.666MHz)Ai5VLLLAj [X1] |
| 21 | RCRUA0014FCZZ | AP | | B | Crystal(68.5MHz) [X5] |
| 22 | RFiLN0048FCZZ | AC | | C | Ferrite bead(BLM10B121SB) [L2,3] |
| 23 | RFiLN0051FCZZ | AC | | C | Ferrite bead(MMZ1608D121B) [L25~30,33,34] |
| 24 | RMPTR4100ACZZ | AB | | B | Block resistor(10Ω×4) [BR6~13,15~25,28,29] |
| | RMPTR4100ACZZ | AB | | B | Block resistor(10Ω×4) [BR33~44,46,48,53~72] |
| 25 | RMPTR4103ACZZ | AB | | B | Block resistor(10KΩ×4) [BR1~5,14,26,27,30,31,32] |
| | RMPTR4103ACZZ | AB | | B | Block resistor(10KΩ×4) [BR74,76,78,80~102] |
| 26 | RMPTR4330ACZZ | AB | | B | Block resistor(33Ω×4) [BR47,49,50,51,73,75,77,79] |
| 27 | RMPTR4472ACZZ | AB | | B | Block resistor(4.7KΩ×4) [BR45,52] |
| 28 | UBATT0014FCZZ | AN | | B | Battery(CR2477-H01) [BT1] |
| 29 | VCCCCZ1HH101J | AA | | C | Capacitor(50WV 100pF) [C7,8,10,17,18,20,22,30,33] |
| | VCCCCZ1HH101J | AA | | C | Capacitor(50WV 100pF) [C35,38,39,40,43,47,48,51] |
| 30 | VCCCCZ1HH220J | AA | | C | Capacitor(50WV 22pF) [C61] |
| 31 | VCEAPH1HC105M | AC | | C | Capacitor(50WV 1μF) [C181,188,205,206] |
| 32 | VCEAPS1AC227M | AD | | C | Capacitor(10WV 220μF) [C309,310] |
| 33 | VCEAPS1CC106M | AC | | C | Capacitor(16WV 10μF) [C1,6,21,75,94,111,125,165] |
| | VCEAPS1CC106M | AC | | C | Capacitor(16WV 10μF) [C166,169,178,179,223,224] |
| 34 | VCEAPS1CC226M | AC | | C | Capacitor(16WV 22μF) [C57,64,90,114,115,136,170,176] |
| 35 | VCEAPS1CC476M | AC | | C | Capacitor(16WV 47μF) [C95,167,168,180] |
| 36 | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C3,9,11,12,13,14,23~29] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C31,32,34,36,37,41,42,44,45] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C46,49,50,52,53,54,55,56] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C58,59,60,62,63,65,66,67] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C68,70,71,72,73,74,76~82] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C85,86,87,88,89,91,92,93] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C96,97,98,99,100,102~108] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C110,112,113,116~124,126] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C127,128,130,131,132,133] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C134,135,137,139,140~145] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C149,151,153~164,172,173] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C177,182,183,185,186,187] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C189~199,201,202,204] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C208~222,235~262] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) [C264~279,292~303] |
| 37 | VCKYCZ1HB102K | AA | | C | Capacitor(50WV 1000pF) [C129] |
| 38 | VCKYCZ1HF103Z | AA | | C | Capacitor(50WV 0.01μF) [C69,109] |
| 39 | VHDDAP202U/-1 | AB | | B | Diode(DAP202U) [D7,10] |
| 40 | VHDRB451F//-1 | AD | | B | Diode(RB451F) [D12,14,20,21,22] |
| 41 | VHDRLS73///-1 | AA | | B | Diode(RLS73) [D8,9] |
| 42 | VHi65946P07-1 | BA | | B | IC(65946P07) [IC32] |
| 43 | VHi74LCX08MTC | AE | | B | IC(74LCX08MTC) [IC26,46] |
| 44 | VHi74LCX14MTC | AE | | B | IC(74LCX14MTC) [IC43] |
| 45 | VHi74LCX244MT | AG | | B | IC(74LCX244MT) [IC12] |
| 46 | VHi74LCX32MTC | AE | | B | IC(74LCX32MTC) [IC11] |
| 47 | VHi74LVX16128 | AP | | B | IC(74LVX16128) [IC15] |
| 48 | VHi90LV17AW-1 | AP | | B | IC(90LV17AW) [IC18] |

## 26 MFP Control PWB (ARM350N/M450N)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 49 | VHIDS14C238// | AT | | B | IC(DS14C238) | [IC42] |
| 50 | VHIEEP64-120P | AW | | B | IC(EEP64-120P) | [IC36] |
| 51 | VHIHG73C095-1 | AY | | B | IC(HG73C095) | [IC53] |
| 52 | VHIKS0U1347-1 | BN | | B | IC(KS0U1347) | [IC19] |
| 53 | VHILCX157MT-1 | AG | | B | IC(LCX157MT) | [IC14] |
| 54 | VHILCX16244-1 | AM | | B | IC(LCX16244) | [IC21,49,50] |
| 55 | VHILCX16245-1 | AM | | B | IC(LCX16245) | [IC16,24,31,51,52] |
| 56 | VHILCX16373-1 | AM | | B | IC(LCX16373) | [IC34] |
| 57 | VHILCX74MTC-1 | AE | | B | IC(LCX74MTC) | [IC10] |
| 58 | VHILM393D++-1 | AE | | B | IC(LM393D) | [IC39] |
| 59 | VHILVT240MT-1 | AL | | B | IC(LVT240MT) | [IC8] |
| 60 | VHIM87J4810-1 | BK | | B | IC(M87J4810) | [IC25] |
| 61 | VHIN2370R04-1 | AF | | B | IC(N2370R04) | [IC23] |
| 62 | VHIN2370R33-1 | AF | | B | IC(N2370R33) | [IC54] |
| 63 | VHIN2391D25-1 | AG | | B | IC(N2391D25) | [IC35,33] |
| 64 | VHINJM317DL-1 | AK | | B | IC(NJM317DL) | [IC2] |
| 65 | VHINJU6356E-1 | AK | | B | IC(NJU6356E) | [IC40] |
| 66 | VHIPI6C2309-1 | AR | | B | IC(PI6C2309) | [IC9,29] |
| 67 | VHIPM2500++-1 | BP | | B | IC(PM2500) | [IC13] |
| 68 | VHIPST598DN-1 | AF | | B | IC(PST598DN) | [IC47] |
| 69 | VHIPST598IN-1 | AF | | B | IC(PST598I) | [IC48] |
| 70 | VHISD4M16L1-1 | AZ | | B | IC(SD4M16L1) | [IC22] |
| 71 | VHISD8M16L1-1 | BB | | B | IC(SD8M16L1) | [IC4,5,6,7,27] |
| 72 | VHISR1024-7LL | AU | | B | IC(SR1024-7LL) | [IC55,56] |
| 73 | VHIT4955A20-1 | BF | | B | IC(T4955A20) | [IC20] |
| 74 | VHITD62503F-1 | AF | | B | IC(TD62503F) | [IC38,41,44,45] |
| 75 | VHP1LHEE-002A | AC | | B | LED (Red)(1LHEE-002A) | [D13] |
| 76 | VHV1608C2701C | AC | | B | Varistor(1608C2701C) | [RV1-6] |
| 77 | VHVICPS1.2/-1 | AF | | B | IC protecrot(ICPS1.2) | [Q1] |
| 78 | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R1,3,32,33,49,77,94,97,106] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R108,120,141,166,198,220,222] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R225,229,232,233,290~307] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R310~348,399,400,406] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R407,409,410,413,414] |
| 79 | VRS-CZ1JD100J | AA | | C | Resistor(1/16W 10Ω ±5%) | [R36,59,64,65,96,116,118,126] |
| | VRS-CZ1JD100J | AA | | C | Resistor(1/16W 10Ω ±5%) | [R127,136,137,149,161,170,177,185] |
| 80 | VRS-CZ1JD101J | AA | | C | Resistor(1/16W 100Ω ±5%) | [R9,10,101,102,109] |
| | VRS-CZ1JD101J | AA | | C | Resistor(1/16W 100Ω ±5%) | [R183,235,236,403] |
| 81 | VRS-CZ1JD102J | AA | | C | Resistor(1/16W 1.0KΩ ±5%) | [R11,129,130,134,151,204] |
| | VRS-CZ1JD102J | AA | | C | Resistor(1/16W 1.0KΩ ±5%) | [R205,243,244,253,268,279] |
| 82 | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R12,13,15,16,18,20,44,45] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R60,61,62,70,72,73,86,91] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R93,112,115,123,131,139] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R144,154,158,159,160,163] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R165,167,168,203,207,208] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R213,216,217,230,237,238] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R239,240,241,242,245,246] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R249,254,259,260,261,263] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R264,267,269,271,272,273] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R274,282,283,284,285] |
| 83 | VRS-CZ1JD183J | AA | | C | Resistor(1/16W 18KΩ ±5%) | [R275,280] |
| 84 | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R14,17,19,24,27,30,31,34] |
| | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R35,37,39,40,43,46,51,54] |
| | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R57,247,252] |
| 85 | VRS-CZ1JD221J | AA | | C | Resistor(1/16W 220Ω ±5%) | [R180,181,404] |
| 86 | VRS-CZ1JD222J | AA | | C | Resistor(1/16W 2.2KΩ ±5%) | [R199,200,209,210,211,212] |
| | VRS-CZ1JD222J | AA | | C | Resistor(1/16W 2.2KΩ ±5%) | [R218,223,248,265,266,276] |
| 87 | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R25,38,41,47,48,52,56,58,66] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R67,68,69,92,117,138,142] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R143,147,148,152,153,173] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R174,175,176,187,188,] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R214,288,289] |
| 88 | VRS-CZ1JD332J | AA | | C | Resistor(1/16W 3.3KΩ ±5%) | [R215,119] |
| 89 | VRS-CZ1JD333J | AA | | C | Resistor(1/16W 33KΩ ±5%) | [R107,179] |
| 90 | VRS-CZ1JD470J | AA | | C | Resistor(1/16W 47Ω ±5%) | [R53,55,308,309] |
| 91 | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R63,71,74,76,87,100,111,121] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R122,124,128,133,146,162,164] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R184,206,221,224,226,227,228] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R231,250,251,262,270,277] |
| 92 | VRS-CZ1JD511J | AA | | C | Resistor(1/16W 510Ω ±5%) | [R278] |
| 93 | VRS-CZ1JD750J | AA | | C | Resistor(1/16W 75Ω ±5%) | [R114,145] |
| 94 | VRS-CZ1JD823J | AA | | C | Resistor(1/16W 82KΩ ±5%) | [R202] |
| 95 | VSDTC114EK/-1 | AB | | B | Transistor(DTC114EK) | [Q3] |
| 96 | VSDTC114YK/-1 | AC | | B | Transistor(DTC114YK) | [Q4] |
| 97 | VSUPA502T//-1 | AD | | B | Transistor(UPA502T) | [Q5,6,7] |
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## 27 STD control PWB(ARM350U/M450U)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | PCAPH0010GCZZ | AD | | C | Jumper cap(JM-2W-96) | [JP2~7] |
| 2 | PCOVP1468FCZZ | AD | | C | Battery cover | |
| 3 | QCNCM1146FCZZ | AE | | C | Connector(9A12-1034) | [CN14] |
| 4 | QCNCM1182FCZZ | AM | | C | Connector(100P9.2JXKS) | [CN16] |
| 5 | QCNCM1183FCZZ | AM | | C | Connector(100P15.2JXK) | [CN2,12] |
| 6 | QCNCW0946FCZZ | AH | | C | Connector(36pin) | [CN1] |
| 7 | QCNCW1147FCZZ | AL | | C | Connector(TX2450RLTH1) | [CN13] |
| 8 | QCNCW1149FCZZ | AN | | C | Connector(8AL068S305C) | [CN8] |
| ⚠ 9 | QFS-D132CQCZZ | AG | | A | Fuse(1.25/250T) | [F1] |
| 10 | QFSHB0028FCZZ | AC | | C | Fuse holder(TP00351-31) | [F1] |
| 11 | QPiN-0003GCZZ | AC | | C | Pin(T3B-SQ) | [JP2~7] |
| 12 | QSOCZ0001QSZZ | AL | | C | Socket(DMM168-FLAA2-3A133) | [CN3] |
| 13 | QSOCZ0073FCNA | AL | | C | Connector(DMM2SD72A11) | [CN4,5,6] |
| 14 | QSOCZ6428ACZZ | AE | | C | IC socket(28pin) | [IC36] |
| 15 | RCRSP6676RCZZ | AG | | B | Crystal(32.768KHz) | [X6] |
| 16 | RCRUA0005FCZZ | AP | | B | Crystal(14.745KHz) | [X7] |
| 17 | RCRUA0007FCZZ | AP | | B | Crystal(31.554MHz) | [X4] |
| 18 | RCRUA0008FCZZ | AP | | B | Crystal(40.57MHz) | [X2] |
| 19 | RCRUA0009FCZZ | AP | | B | Crystal(66.666MHZ) | [X3] |
| 20 | RCRUA0012FCZZ | AP | | B | Crystal(66.666MHz)Ai5VLLLAj | [X1] |
| 21 | RCRUA0014FCZZ | AP | | B | Crystal(68.5MHz) | [X5] |
| 22 | RFiLN0048FCZZ | AC | | C | Ferrite bead(BLM10B121SB) | [L2,3] |
| 23 | RFiLN0051FCZZ | AC | | C | Ferrite bead(MMZ1608D121B) | [L25~30,33,34] |
| 24 | RMPTR4100ACZZ | AB | | B | Block resistor(10Ω×4) | [BR6~13,15~25,28,29] |
| | RMPTR4100ACZZ | AB | | B | Block resistor(10Ω×4) | [BR33~44,46,48,53~72] |
| 25 | RMPTR4103ACZZ | AB | | B | Block resistor(10KΩ×4) | [BR1~5,14,26,27,30,31,32] |
| | RMPTR4103ACZZ | AB | | B | Block resistor(10KΩ×4) | [BR74,76,78,80~102] |
| 26 | RMPTR4330ACZZ | AB | | B | Block resistor(33Ω×4) | [BR47,49,50,51,73,75,77,79] |
| 27 | RMPTR4472ACZZ | AB | | B | Block resistor(4.7KΩ×4) | [BR45,52] |
| 28 | UBATi0014FCZZ | AN | | B | Battery(CR2477-H01) | [BT1] |
| 29 | VCCCCZ1HH101J | AA | | C | Capacitor(50WV 100pF) | [C7,8,10,17,18,20,22,30,33] |
| | VCCCCZ1HH101J | AA | | C | Capacitor(50WV 100pF) | [C35,38,39,40,43,47,48,51] |
| 30 | VCCCCZ1HH220J | AA | | C | Capacitor(50WV 22pF) | [C61] |
| 31 | VCEAPH1HC105M | AC | | C | Capacitor(50WV 1μF) | [C181,188,205,206] |
| 32 | VCEAPS1AC227M | AD | | C | Capacitor(10WV 220μF) | [C309,310] |
| 33 | VCEAPS1CC106M | AC | | C | Capacitor(16WV 10μF) | [C1,6,21,75,94,111,125,165] |
| | VCEAPS1CC106M | AC | | C | Capacitor(16WV 10μF) | [C166,169,178,179,223,224] |
| 34 | VCEAPS1CC226M | AC | | C | Capacitor(16WV 22μF) | [C57,64,90,114,115] |
| | VCEAPS1CC226M | AC | | C | Capacitor(16WV 22μF) | [C136,170,176] |
| 35 | VCEAPS1CC476M | AC | | C | Capacitor(16WV 47μF) | [C95,167,168,180] |
| 36 | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C3,9,11,12,13,14] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C23~29,31,32,34] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C36,37,41,42,44,45,46,49] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C50,52~56,58,59,60] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C62,63,65,66,67,68,70,71] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C72,73,74,76~82] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C85~89,91,92,93] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C96~100,102~108] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C110,112,113,116~124] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C126,127,128,130~135] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C137,139~145,149,151] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C153~164,172,173,177] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C182,183,185,186,187] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C189~199,201,202,204] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C208~222,235~262] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor(16WV 0.10μF) | [C264~279,292~303] |
| 37 | VCKYCZ1HB102K | AA | | C | Capacitor(50WV 1000pF) | [C129] |
| 38 | VCKYCZ1HF103Z | AA | | C | Capacitor(50WV 0.01μF) | [C69,109] |
| 39 | VHDDAP202U/-1 | AB | | B | Diode(DAP202U) | [D7,10] |
| 40 | VHDRB451F//-1 | AD | | B | Diode(RB451F) | [D12,14,20,21,22] |
| 41 | VHDRLS73///-1 | AA | | B | Diode(RLS73) | [D8,9] |
| 42 | VHi65946P07-1 | BA | | B | IC(65946P07) | [IC32] |
| 43 | VHi74LCX08MTC | AE | | B | IC(74LCX08MTC) | [IC26,46] |
| 44 | VHi74LCX14MTC | AE | | B | IC(74LCX14MTC) | [IC43] |
| 45 | VHi74LCX244MT | AG | | B | IC(74LCX244MT) | [IC12] |
| 46 | VHi74LCX32MTC | AE | | B | IC(74LCX32MTC) | [IC11] |
| 47 | VHi74LVX16128 | AP | | B | IC(74LVX16128) | [IC15] |
| 48 | VHi90LV17AW-1 | AP | | B | IC(90LV17AW) | [IC18] |
| 49 | VHiDS14C238// | AT | | B | IC(DS14C238) | [IC42] |
| 50 | VHiEEP64-120P | AW | | B | IC(EEP64-120P) | [IC36] |
| 51 | VHiHG73C095-1 | AY | | B | IC(HG73C095) | [IC53] |
| 52 | VHiKS0U1347-1 | BN | | B | IC(KS0U1347) | [IC19] |
| 53 | VHiLCX157MT-1 | AG | | B | IC(LCX157MT) | [IC14] |
| 54 | VHiLCX16244-1 | AM | | B | IC(LCX16244) | [IC21,49,50] |
| 55 | VHiLCX16245-1 | AM | | B | IC(LCX16245) | [IC16,24,31,51,52] |
| 56 | VHiLCX16373-1 | AM | | B | IC(LCX16373) | [IC34] |
| 57 | VHiLCX74MTC-1 | AE | | B | IC(LCX74MTC) | [IC10] |
| 58 | VHiLM393D++-1 | AE | | B | IC(LM393D) | [IC39] |
| 59 | VHiLVT240MT-1 | AL | | B | IC(LVT240MT) | [IC8] |
| 60 | VHiM87J4810-1 | BK | | B | IC(M87J4810) | [IC25] |

## 27 STD control PWB(ARM350U/M450U)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 61 | VHiN2370R04-1 | AF | | B | IC(N2370R04) | [IC23] |
| 62 | VHiN2370R33-1 | AF | | B | IC(N2370R33) | [IC54] |
| 63 | VHiN2391D25-1 | AG | | B | IC(N2391D25) | [IC33,35] |
| 64 | VHiNJM317DL-1 | AK | | B | IC(NJM317DL) | [IC2] |
| 65 | VHiNJU6356E-1 | AK | | B | IC(NJU6356E) | [IC40] |
| 66 | VHiPi6C2309-1 | AR | | B | IC(PI6C2309) | [IC9,29] |
| 67 | VHiPM2500++-1 | BP | | B | IC(PM2500) | [IC13] |
| 68 | VHiPST598DN-1 | AF | | B | IC(PST598DN) | [IC47] |
| 69 | VHiPST598iN-1 | AF | | B | IC(PST598I) | [IC48] |
| 70 | VHiSD4M16L1-1 | AZ | | B | IC(SD4M16L1) | [IC22] |
| 71 | VHiSD8M16L1-1 | BB | | B | IC(SD8M16L1) | [IC4,5,6,7,27] |
| 72 | VHiSR1024-7LL | AU | | B | IC(SR1024-7LL) | [IC55,56] |
| 73 | VHiT4955A20-1 | BF | | B | IC(T4955A20) | [IC20] |
| 74 | VHiTD62503F-1 | AF | | B | IC(TD62503F) | [IC38,41,44,45] |
| 75 | VHP1LHEE-002A | AC | | B | LED (Red)(1LHEE-002A) | [D13] |
| 76 | VHV1608C2701C | AC | | B | Varistor(M1608C270KT) | [RV1-6] |
| 77 | VHViCPS1.2/-1 | AF | | B | IC protecrot(ICPS1.2) | [Q1] |
| 78 | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R1,3,32,33,49,94,97] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R106,108,120,141,166] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R198,220,222,225,229] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R232,233,290~307] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R310~348,399,400,406] |
| | VRS-CZ1JD000J | AA | | C | Resistor(1/16W 0Ω ±5%) | [R407,409,410,413,414] |
| 79 | VRS-CZ1JD100J | AA | | C | Resistor(1/16W 10Ω ±5%) | [R36,59,64,65,77,96,116] |
| | VRS-CZ1JD100J | AA | | C | Resistor(1/16W 10Ω ±5%) | [R118,126,127,136,137] |
| | VRS-CZ1JD100J | AA | | C | Resistor(1/16W 10Ω ±5%) | [R149,161,170,177,185] |
| 80 | VRS-CZ1JD101J | AA | | C | Resistor(1/16W 100Ω ±5%) | [R9,10,101,102,109] |
| | VRS-CZ1JD101J | AA | | C | Resistor(1/16W 100Ω ±5%) | [R183,235,236,403] |
| 81 | VRS-CZ1JD102J | AA | | C | Resistor(1/16W 1.0KΩ ±5%) | [R11,129,130,134,151,204] |
| | VRS-CZ1JD102J | AA | | C | Resistor(1/16W 1.0KΩ ±5%) | [R205,243,244,253,268,279] |
| 82 | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R12,13,15,16,18,20,44,45] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R60,61,62,70,72,73,86,91] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R93,112,115,123,131,139] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R144,154,158,159,160,163] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R165,167,168,203,207,208] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R213,216,217,230,237,238] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R239,240,241,242,245,246] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R249,254,259,260,261,263] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R264,267,269,271,272,273] |
| | VRS-CZ1JD103J | AA | | C | Resistor(1/16W 10KΩ ±5%) | [R274,282,283,284,285] |
| 83 | VRS-CZ1JD183J | AA | | C | Resistor(1/16W 18KΩ ±5%) | [R275,280] |
| 84 | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R14,17,19,24,27,30,31,34] |
| | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R35,37,39,40,43,46,51,54] |
| | VRS-CZ1JD220J | AA | | C | Resistor(1/16W 22Ω ±5%) | [R57,247,252] |
| 85 | VRS-CZ1JD221J | AA | | C | Resistor(1/16W 220Ω ±5%) | [R180,181,404] |
| 86 | VRS-CZ1JD222J | AA | | C | Resistor(1/16W 2.2KΩ ±5%) | [R199,200,209,210,211,212] |
| | VRS-CZ1JD222J | AA | | C | Resistor(1/16W 2.2KΩ ±5%) | [R218,223,248,265,266,276] |
| 87 | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R25,38,41,47,48,52,56,58] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R66,67,68,69,92,117,138] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R142,143,147,148,152,153] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R173~176,187,188] |
| | VRS-CZ1JD330J | AA | | C | Resistor(1/16W 33Ω ±5%) | [R214,288,289] |
| 88 | VRS-CZ1JD332J | AA | | C | Resistor(1/16W 3.3KΩ ±5%) | [R119,215] |
| 89 | VRS-CZ1JD333J | AA | | C | Resistor(1/16W 33KΩ ±5%) | [R107,179] |
| 90 | VRS-CZ1JD470J | AA | | C | Resistor(1/16W 47Ω ±5%) | [R53,55,308,309] |
| 91 | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R63,71,74,76,87,100,111] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R121,122,124,128,133,146] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R162,164,184,206,221,224] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R226,227,228,231,250,251] |
| | VRS-CZ1JD472J | AA | | C | Resistor(1/16W 4.7KΩ ±5%) | [R262,270,277] |
| 92 | VRS-CZ1JD511J | AA | | C | Resistor(1/16W 510Ω ±5%) | [R278] |
| 93 | VRS-CZ1JD750J | AA | | C | Resistor(1/16W 75Ω ±5%) | [R114,145] |
| 94 | VRS-CZ1JD823J | AA | | C | Resistor(1/16W 82KΩ ±5%) | [R202] |
| 95 | VSDTC114EK/-1 | AB | | B | Transistor(DTC114EK) | [Q3] |
| 96 | VSDTC114YK/-1 | AC | | B | Transistor(DTC114YK) | [Q4] |
| 97 | VSUPA502T//-1 | AD | | B | Transistor(UPA502T) | [Q5,6,7] |

## ■ Index

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| 〔C〕 | | | | | |
| CDSKA0005FC37 | 17- 12 | AL | | D | |
| CPNLH0020QS37 | 1- 26 | AK | N | D | |
| CPNLH0020QS38 | 1- 26 | AK | N | D | |
| CPNLH0020QS39 | 1- 26 | AK | N | D | |
| CPNLH0020QS40 | 1- 26 | AK | N | D | |
| 〔G〕 | | | | | |
| GCAB-0940FCZ2 | 1- 5 | BA | | D | |
| 〔H〕 | | | | | |
| HPNLC0243FCZ1 | 1- 11 | AP | | D | |
| 〔L〕 | | | | | |
| LANGT1407FCZ2 | 2- 13 | AR | | C | |
| LDAiU0626FCZ2 | 8- 14 | AK | | C | |
| LPLTM5765FCZ1 | 12- 35 | AH | | C | |
| LPLTM6022FCZZ | 11- 29 | AC | | C | |
| LX-BZ0147FCZ1 | 2- 3 | AC | | C | |
| LX-BZ0589FCZ1 | 3- 38 | AA | | C | |
| LX-BZ0656FCZ1 | 10- 26 | AE | N | C | |
| LX-BZ0670FCZ1 | 4- 25 | AC | | C | |
| LX-BZ0788FCZ1 | 4- 67 | AC | | C | |
| LX-BZ0828FCZZ | 12- 56 | AD | | C | |
| LX-BZ0921FCZ1 | 12- 25 | AE | | C | |
| LX-WZ0440FCZZ | 10- 57 | AC | | C | |
| 〔M〕 | | | | | |
| MSPRC2954FCZ1 | 10- 47 | AA | | C | |
| MSPRC3010FCZ1 | 10- 16 | AB | | C | |
| 〔N〕 | | | | | |
| NBLTH0327FCZ1 | 8- 38 | AL | | B | |
| NBLTH0350FCZ1 | 8- 47 | AH | | B | |
| NFANP0069FCZZ | 12- 5 | AV | | B | |
| 〃 | 14- 1 | AV | | B | |
| 〃 | 2- 27 | AV | | B | |
| 〃 | 8- 5 | AV | | B | |
| NSFTZ2576FCZ1 | 4- 71 | AL | | C | |
| 〔P〕 | | | | | |
| PBRSS0208FCZ1 | 8- 62 | AH | | C | |
| PCAPH0010GCZZ | 26- 1 | AD | | C | |
| 〃 | 27- 1 | AD | | C | |
| PCOVP1468FCZZ | 26- 2 | AD | | C | |
| 〃 | 27- 2 | AD | | C | |
| PCOVP1555FCZ1 | 12- 9 | AE | | C | |
| PCOVP1557FCZZ | 12- 38 | AC | | C | |
| PCOVP1560FCZZ | 12- 37 | AC | | C | |
| PCOVP1693FCZZ | 14- 55 | AH | | C | |
| PDUC-0165FCZ1 | 12- 1 | AF | | C | |
| PGiDM1896FCZ1 | 8- 10 | AV | | C | |
| PMLT-1238FCZ1 | 10- 48 | AC | | C | |
| PMLT-1241FCZ1 | 11- 48 | AA | | C | |
| PMLT-1244FCZ1 | 11- 49 | AC | | C | |
| PMLT-1296FCZZ | 11- 56 | AH | | C | |
| PSHEP4927FCZ1 | 17- 13 | AR | | D | |
| PSHEP4945FCZZ | 12- 45 | AC | | C | |
| PSHEP4962FCZ1 | 8- 66 | AC | | C | |
| PSHEP5009FCZZ | 12- 57 | AC | | C | |
| PSHEZ4873FCZ1 | 14- 7 | AC | | C | |
| PSHEZ4874FCZ1 | 14- 5 | AC | | C | |
| PSHEZ4885FCZ1 | 14- 37 | AB | | C | |
| PSPAZ1431FCZZ | 10- 59 | AA | | C | |
| PSPAZ1432FCZZ | 10- 60 | AA | | C | |
| PTME-0279FCZ1 | 2- 16 | AB | | C | |
| PTME-0282FCZ1 | 7- 3 | AH | | C | |
| PTME-0287FCZ1 | 2- 9 | AD | | C | |
| 〔Q〕 | | | | | |
| QCNCM1146FCZZ | 26- 4 | AE | | C | |
| 〃 | 27- 3 | AE | | C | |
| QCNCM1182FCZZ | 26- 5 | AM | | C | |
| 〃 | 27- 4 | AM | | C | |
| QCNCM1183FCZZ | 26- 3 | AM | | C | |
| 〃 | 27- 5 | AM | | C | |
| QCNCW0946FCZZ | 26- 6 | AH | | C | |
| 〃 | 27- 6 | AH | | C | |
| QCNCW1147FCZZ | 26- 7 | AL | | C | |
| 〃 | 27- 7 | AL | | C | |
| QCNCW1149FCZZ | 26- 8 | AN | | C | |
| 〃 | 27- 8 | AN | | C | |
| QCNW-0201FCZZ | 12- 14 | AG | | C | |
| QCNW-0203FCZZ | 15- 56 | AD | | C | |
| QCNW-0204FCZZ | 15- 55 | AC | | C | |
| QCNW-0205FCZZ | 15- 54 | AC | | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| QFS-D132CQCZZ | 26- 9 | AG | | A | |
| 〃 | 27- 9 | AG | | A | |
| QFSHB0028FCZZ | 26- 10 | AC | | C | |
| 〃 | 27- 10 | AC | | C | |
| QPiN-0003GCZZ | 26- 11 | AC | | C | |
| 〃 | 27- 11 | AC | | C | |
| QSOCZ0001QSZZ | 26- 12 | AL | | C | |
| 〃 | 27- 12 | AL | | C | |
| QSOCZ0073FCNA | 26- 13 | AL | | C | |
| 〃 | 27- 13 | AL | | C | |
| QSOCZ6428ACZZ | 26- 14 | AE | | C | |
| 〃 | 27- 14 | AE | | C | |
| 〔R〕 | | | | | |
| RCRSP6676RCZZ | 26- 15 | AG | | B | |
| 〃 | 27- 15 | AG | | B | |
| RCRUA0005FCZZ | 26- 16 | AP | | B | |
| 〃 | 27- 16 | AP | | B | |
| RCRUA0007FCZZ | 26- 17 | AP | | B | |
| 〃 | 27- 17 | AP | | B | |
| RCRUA0008FCZZ | 26- 18 | AP | | B | |
| 〃 | 27- 18 | AP | | B | |
| RCRUA0009FCZZ | 26- 19 | AP | | B | |
| 〃 | 27- 19 | AP | | B | |
| RCRUA0012FCZZ | 26- 20 | AP | | B | |
| 〃 | 27- 20 | AP | | B | |
| RCRUA0014FCZZ | 26- 21 | AP | | B | |
| 〃 | 27- 21 | AP | | B | |
| RFiLN0048FCZZ | 26- 22 | AC | | C | |
| 〃 | 27- 22 | AC | | C | |
| RFiLN0051FCZZ | 26- 23 | AC | | C | |
| 〃 | 27- 23 | AC | | C | |
| RMPTR4100ACZZ | 26- 24 | AB | | B | |
| 〃 | 27- 24 | AB | | B | |
| RMPTR4103ACZZ | 26- 25 | AB | | B | |
| 〃 | 27- 25 | AB | | B | |
| RMPTR4330ACZZ | 26- 26 | AB | | B | |
| 〃 | 27- 26 | AB | | B | |
| RMPTR4472ACZZ | 26- 27 | AB | | B | |
| 〃 | 27- 27 | AB | | B | |
| 〔S〕 | | | | | |
| SPAKA6272FCZZ | 17- 28 | AG | N | D | |
| SPAKC6122DS37 | 17- 5 | AU | N | D | |
| SPAKC6122DS38 | 17- 5 | AU | N | D | |
| SPAKC6122DS39 | 17- 5 | AU | N | D | |
| SPAKC6122DS40 | 17- 5 | AU | N | D | |
| 〔T〕 | | | | | |
| TCADZ1521FCZ1 | 17- 6 | AE | | D | |
| TiNSE2061GHZZ | 17- 20 | AZ | N | D | |
| TiNSE2077FCZZ | 17- 20 | AQ | N | D | |
| TiNSE2078FCZZ | 17- 20 | AW | N | D | |
| TiNSE2081GHZZ | 17- 20 | AR | N | D | |
| TiNSE2119FCZZ | 17- 20 | AN | N | D | |
| TiNSE2120FCZZ | 17- 20 | AV | N | D | |
| TiNSE2123GHZZ | 17- 20 | AP | N | D | |
| TiNSE2214FCZZ | 17- 20 | AG | N | D | |
| TiNSE2215FCZZ | 17- 20 | AG | N | D | |
| TiNSE2218GHZZ | 17- 20 | AC | N | D | |
| TiNSE2237FCZZ | 17- 20 | AH | N | D | |
| TiNSE2238FCZZ | 17- 20 | AH | N | D | |
| TiNSE2241GHZZ | 17- 20 | AF | N | D | |
| TiNSG2060GHZZ | 17- 20 | AZ | N | D | |
| TiNSG2080GHZZ | 17- 20 | AR | N | D | |
| TiNSG2122GHZZ | 17- 20 | AP | N | D | |
| TiNSG2217GHZZ | 17- 20 | AC | N | D | |
| TiNSG2240GHZZ | 17- 20 | AF | N | D | |
| 〔U〕 | | | | | |
| UBATi0014FCZZ | 26- 28 | AN | | B | |
| 〃 | 27- 28 | AN | | B | |
| 〔V〕 | | | | | |
| VCCCCZ1HH101J | 26- 29 | AA | | C | |
| 〃 | 27- 29 | AA | | C | |
| VCCCCZ1HH220J | 26- 30 | AA | | C | |
| 〃 | 27- 30 | AA | | C | |
| VCEAPH1HC105M | 26- 31 | AC | | C | |
| 〃 | 27- 31 | AC | | C | |
| VCEAPS1AC227M | 26- 32 | AD | | C | |
| 〃 | 27- 32 | AD | | C | |
| VCEAPS1CC106M | 26- 33 | AC | | C | |
| 〃 | 27- 33 | AC | | C | |
| VCEAPS1CC226M | 26- 34 | AC | | C | |
| 〃 | 27- 34 | AC | | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| VCEAPS1CC476M | 26- 35 | AC | | C | |
| 〃 | 27- 35 | AC | | C | |
| VCKYCZ1CF104Z | 26- 36 | AB | | C | |
| 〃 | 27- 36 | AB | | C | |
| VCKYCZ1HB102K | 26- 37 | AA | | C | |
| 〃 | 27- 37 | AA | | C | |
| VCKYCZ1HF103Z | 26- 38 | AA | | C | |
| 〃 | 27- 38 | AA | | C | |
| VHDDAP202U/-1 | 26- 39 | AB | | B | |
| 〃 | 27- 39 | AB | | B | |
| VHDRB451F//-1 | 26- 40 | AD | | B | |
| 〃 | 27- 40 | AD | | B | |
| VHDRLS73///-1 | 26- 41 | AA | | B | |
| 〃 | 27- 41 | AA | | B | |
| VHi28F081L04F | 15- 58 | BE | N | B | |
| VHi28F322L03F | 12- 54 | BU | N | B | |
| VHi28F322L04F | 12- 55 | BU | N | B | |
| VHi28F322L15F | 12- 54 | BU | N | B | |
| VHi28F322L16F | 12- 55 | BU | N | B | |
| VHi65946P07-1 | 26- 42 | BA | | B | |
| 〃 | 27- 42 | BA | | B | |
| VHi74LCX08MTC | 26- 43 | AE | | B | |
| 〃 | 27- 43 | AE | | B | |
| VHi74LCX14MTC | 26- 44 | AE | | B | |
| 〃 | 27- 44 | AE | | B | |
| VHi74LCX244MT | 26- 45 | AG | | B | |
| 〃 | 27- 45 | AG | | B | |
| VHi74LCX32MTC | 26- 46 | AE | | B | |
| 〃 | 27- 46 | AE | | B | |
| VHi74LVX16128 | 26- 47 | AP | | B | |
| 〃 | 27- 47 | AP | | B | |
| VHi90LV17AW-1 | 26- 48 | AP | | B | |
| 〃 | 27- 48 | AP | | B | |
| VHiDS14C238// | 26- 49 | AT | | B | |
| 〃 | 27- 49 | AT | | B | |
| VHiEEP64-120P | 26- 50 | AW | | B | |
| 〃 | 27- 50 | AW | | B | |
| VHiFS781BZB-1 | 18- 54 | AP | | B | |
| VHiHG73C095-1 | 26- 51 | AY | | B | |
| 〃 | 27- 51 | AY | | B | |
| VHiKS0U1347-1 | 26- 52 | BN | | B | |
| 〃 | 27- 52 | BN | | B | |
| VHiLCX157MT-1 | 26- 53 | AG | | B | |
| 〃 | 27- 53 | AG | | B | |
| VHiLCX16244-1 | 26- 54 | AM | | B | |
| 〃 | 27- 54 | AM | | B | |
| VHiLCX16245-1 | 26- 55 | AM | | B | |
| 〃 | 27- 55 | AM | | B | |
| VHiLCX16373-1 | 26- 56 | AM | | B | |
| 〃 | 27- 56 | AM | | B | |
| VHiLCX74MTC-1 | 26- 57 | AE | | B | |
| 〃 | 27- 57 | AE | | B | |
| VHiLM393D++-1 | 26- 58 | AE | | B | |
| 〃 | 27- 58 | AE | | B | |
| VHiLVT240MT-1 | 26- 59 | AL | | B | |
| 〃 | 27- 59 | AL | | B | |
| VHiM87J4810-1 | 26- 60 | BK | | B | |
| 〃 | 27- 60 | BK | | B | |
| VHiN2370R04-1 | 26- 61 | AF | | B | |
| 〃 | 27- 61 | AF | | B | |
| VHiN2370R33-1 | 26- 62 | AF | | B | |
| 〃 | 27- 62 | AF | | B | |
| VHiN2391D25-1 | 26- 63 | AG | | B | |
| 〃 | 27- 63 | AG | | B | |
| VHiNJM317DL-1 | 26- 64 | AK | | B | |
| 〃 | 27- 64 | AK | | B | |
| VHiNJU6356E-1 | 26- 65 | AK | | B | |
| 〃 | 27- 65 | AK | | B | |
| VHiPi6C2309-1 | 26- 66 | AR | | B | |
| 〃 | 27- 66 | AR | | B | |
| VHiPM2500++-1 | 26- 67 | BP | | B | |
| 〃 | 27- 67 | BP | | B | |
| VHiPST598DN-1 | 26- 68 | AF | | B | |
| 〃 | 27- 68 | AF | | B | |
| VHiPST598iN-1 | 26- 69 | AF | | B | |
| 〃 | 27- 69 | AF | | B | |
| VHiSD4M16L1-1 | 26- 70 | AZ | | B | |
| 〃 | 27- 70 | AZ | | B | |
| VHiSD8M16L1-1 | 26- 71 | BB | | B | |
| 〃 | 27- 71 | BB | | B | |
| VHiSR1024-7LL | 26- 72 | AU | | B | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| VHiSR1024-7LL | 27- 72 | AU | | B | |
| VHiT4955A20-1 | 26- 73 | BF | | B | |
| 〃 | 27- 73 | BF | | B | |
| VHiTD62503F-1 | 26- 74 | AF | | B | |
| 〃 | 27- 74 | AF | | B | |
| VHP1LHEE-002A | 26- 75 | AC | | B | |
| 〃 | 27- 75 | AC | | B | |
| VHV1608C2701C | 26- 76 | AC | | B | |
| 〃 | 27- 76 | AC | | B | |
| VHViCPS1.2/-1 | 26- 77 | AF | | B | |
| 〃 | 27- 77 | AF | | B | |
| VRS-CZ1JD000J | 26- 78 | AA | | C | |
| 〃 | 27- 78 | AA | | C | |
| VRS-CZ1JD100J | 26- 79 | AA | | C | |
| 〃 | 27- 79 | AA | | C | |
| VRS-CZ1JD101J | 26- 80 | AA | | C | |
| 〃 | 27- 80 | AA | | C | |
| VRS-CZ1JD102J | 26- 81 | AA | | C | |
| 〃 | 27- 81 | AA | | C | |
| VRS-CZ1JD103J | 26- 82 | AA | | C | |
| 〃 | 27- 82 | AA | | C | |
| VRS-CZ1JD183J | 26- 83 | AA | | C | |
| 〃 | 27- 83 | AA | | C | |
| VRS-CZ1JD220J | 26- 84 | AA | | C | |
| 〃 | 27- 84 | AA | | C | |
| VRS-CZ1JD221J | 26- 85 | AA | | C | |
| 〃 | 27- 85 | AA | | C | |
| VRS-CZ1JD222J | 26- 86 | AA | | C | |
| 〃 | 27- 86 | AA | | C | |
| VRS-CZ1JD330J | 26- 87 | AA | | C | |
| 〃 | 27- 87 | AA | | C | |
| VRS-CZ1JD332J | 26- 88 | AA | | C | |
| 〃 | 27- 88 | AA | | C | |
| VRS-CZ1JD333J | 26- 89 | AA | | C | |
| 〃 | 27- 89 | AA | | C | |
| VRS-CZ1JD470J | 26- 90 | AA | | C | |
| 〃 | 27- 90 | AA | | C | |
| VRS-CZ1JD472J | 26- 91 | AA | | C | |
| 〃 | 27- 91 | AA | | C | |
| VRS-CZ1JD511J | 26- 92 | AA | | C | |
| 〃 | 27- 92 | AA | | C | |
| VRS-CZ1JD750J | 26- 93 | AA | | C | |
| 〃 | 27- 93 | AA | | C | |
| VRS-CZ1JD823J | 26- 94 | AA | | C | |
| 〃 | 27- 94 | AA | | C | |
| VRS-RE3LA6R2J | 20- 9 | AC | | C | |
| VSDTC114EK/-1 | 26- 95 | AB | | B | |
| 〃 | 27- 95 | AB | | B | |
| VSDTC114YK/-1 | 26- 96 | AC | | B | |
| 〃 | 27- 96 | AC | | B | |
| VSUPA502T//-1 | 26- 97 | AD | | B | |
| 〃 | 27- 97 | AD | | B | |
| [X] | | | | | |
| XBBSD30P06000 | 12- 51 | AA | | C | |
| XBBSD30P08000 | 10- 24 | AA | | C | |
| XBPSD26P06000 | 12- 26 | AA | | C | |
| XBPSD30P06000 | 12- 47 | AA | | C | |
| XHBSE30P06000 | 12- 50 | AA | | C | |
| XHBSE40P08000 | 14- 4 | AA | | C | |

SHARP

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**CAUTION FOR BATTERY REPLACEMENT**

(Danish) ADVARSEL !
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää,jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s'il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type on d'un type équivalent recommandé par
le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anwerisugen.

**CAUTION FOR BATTERY DISPOSAL**

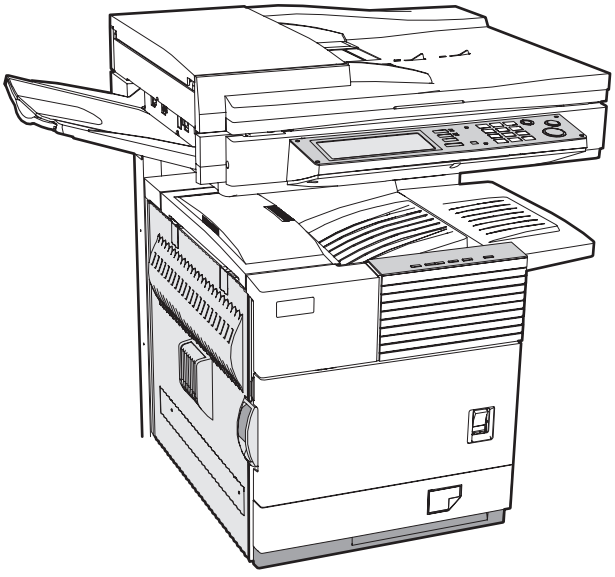
(For USA,CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

**SHARP CORPORATION**
**Document Systems Group**
**Products Quality Assurance Department**
**Yamatokoriyama, Nara 639-1186, Japan**

February 2002 ⓣ

# SHARP SERVICE MANUAL

CODE : 00ZARM350/A1E



# LASER PRINTER

## MODEL AR-M350 AR-M450

**OPTIONS AR-EF1 / AR-M11 / AR-RK1**

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Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.


**SHARP CORPORATION**



This document has been published to be used for after sales service only.
The contents are subject to change without notice.

## CAUTION

This product is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH standard and IEC825. This means that this machine does not produce hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eye's retina, there is the danger of spot damage to the retina.
The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not as individual parts.
2) Do not look into the machine with the main switch turned on after removing the developer unit, toner cartridge, and drum cartridge.
3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
4) The middle frame contains the safety interlock switch.
   Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

## Cautions on laser

| | |
|---|---|
| Wave length | 785 nm +10 nm –15 nm |
| Pulse times | North America:<br>35 cpm model: (4.1 µs ± 4.1 ns)/7 mm<br>45 cpm model: (5.7 µs ± 5.7 ns)/7 mm<br>Europe:<br>35 cpm model: (3.8 µs ± 3.8 ns)/7 mm<br>45 cpm model: (4.4 µs ± 4.4 ns)/7 mm |
| Output power | 0.2 mW - 0.4 mW |

At the production line, the output power of the scanner unit is adjusted to 0.4 MILLIWATT PLUS 8 % and is maintained constant by the operation of the Automatic Power Control (APC).

**Caution**
This product contains a low power laser device. To ensure safety do not remove any cover or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

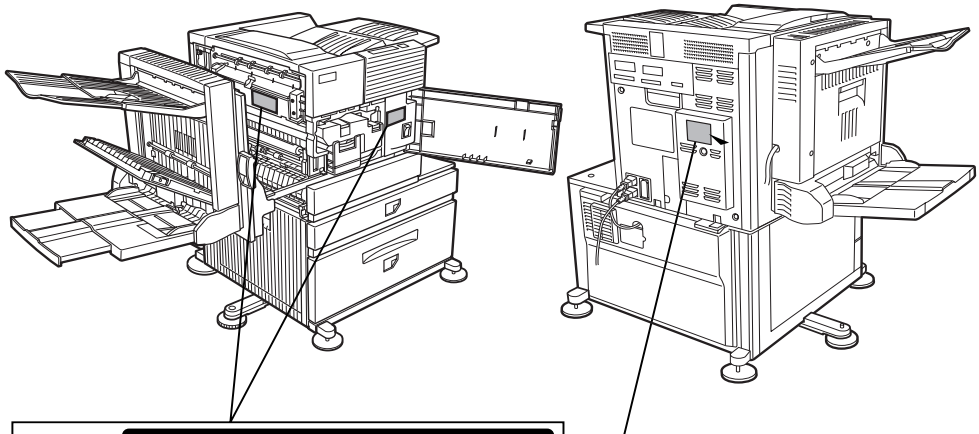
### For North America:

**SAFETY PRECAUTIONS**

This Digital Equipment is rated Class 1 and complies with 21 CFR 1040.10 and 1040.11 of the CDRH standards. This means that the equipment does not produce hazardous laser radiation. For your safety, observe the precautions below.

- Do not remove the cabinet, operation panel or any other covers.
- The equipment's exterior covers contain several safety interlock switches. Do not bypass any safety interlock by inserting wedges or other items into switch slots.

**Caution**
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICHT UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.
ADVERSEL USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRRAR ÄR URKOPPLADE. STRÅLEN ÄR FARLIG. BETRAKTA EJ STRÅLEN.
VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNT LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
Laserstrahl
⚠ 注 意（サービスマン用）
カバーを開けてかつインターロックを無効にした場合には
レーザー光にさらされないようにしてください。

**CLASS 1 LASER PRODUCT**

**LASER KLASSE 1**

### For Europe:

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

**CAUTION**
INVISIBLE LASER RADIATION WHEN OPEN INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

**VORSICHT**
UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

**ADVARSEL**
USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

**VAROITUS!**
LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

**VARNING**
OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

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# [1] PRODUCT OUTLINE

* For the items which are not specified in this Service Manual, refer to the AR-P350/P450 Service Manual.

## A. Scanner unit with duplex SPF (AR-EF1)

This unit is an option scanner unit for the laser printer AR-P350/P450/M350/M450.
By installing this unit to the above laser printer (installation of the AR-RK1 is also required), the printer can work as a digital multi-function device with the following functions:

1) Copy function
2) Network scanner function
   (The AR-NS2, network scanner kit, is required.)
3) Fax function (The AR-FX5, fax extending kit, is required.)

## B. Multi-function controller (AR-M11)

This unit is a multi-function controller for the laser printer AR-P350/P450 or the DM3500/3501/4500/4501.
When installing the AR-EF1 to the above laser printer, the printer controller must be replaced with this multi-function controller.

## C. Scanner rack (AR-RK1)

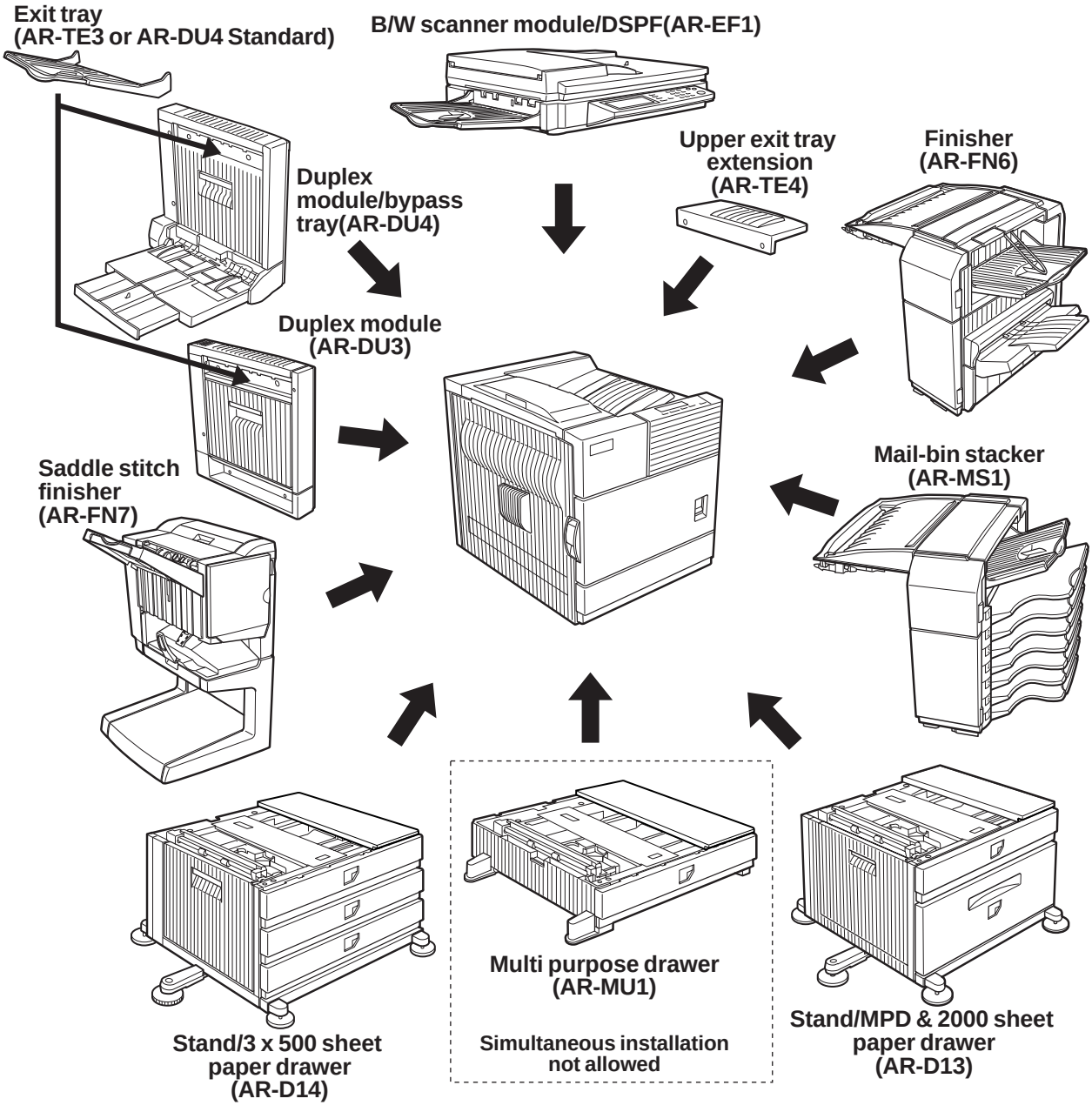
This rack is required when installing the scanner unit (AR-EF1) with duplex DSPF to the laser printer AR-P350/P450/M350/M450.
To install this rack, the machine must be equipped with the large capacity paper feed desk (AR-D13) or the 3 stage paper feed desk (AR-D14).

## D. AR-M350/M450

This machine is a version of the AR-M350/M450, and is equipped with the multi-function controller as standard equipments.
To install this model, the large capacity paper feed desk (AR-D13) or the 3 stage paper feed desk (AR-D14) is required.

# [2] CONFIGURATION

## 1.System Configurations




## 2. Standard

| Category | Model Name | Other options required for the installation/mounting. (Options must be ordered separately.) | Remarks |
|---|---|---|---|
| Printer model (35ppm) | AR-P350 | •Multi Purpose Drawer (AR-MU1), or Stand/MPD&2000 Sheet Paper Drawer (AR-D13), or Three paper drawer stand (AR-D14)<br>•Power Supply Unit (AR-DC1) is required for Stand/MPD&2000 Sheet Paper Drawer (AR-D13) and Three paper drawer stand (AR-D14) | |
| Printer model (45ppm) | AR-P450 | | |
| MFP model (35ppm) | AR-M350 | •B/W Scanner module/DSPF (AR-EF1)<br>•Scanner Rack(AR-RK1)<br>•Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14)<br>•Power supply unit (AR-DC1) | |
| MFP model (45ppm) | AR-M450 | | |

## 3. List of combination of peripheral devices

As shown in the table below, some other peripheral devices ( B ) may be needed for installation of a peripheral device ( A ) and some peripheral devices cannot be installed together.

| A | | | B: B/W scanner module/DSPF | Scanner rack | Multi purpose drawer | Stand/3 x 500 sheet paper drawer | Stand/MPD & 2000 sheet | Duplex module/bypass tray | Duplex module | Saddle stitch finisher | Finisher | Mail-bin stacker | Exit tray | Upper exit tray extension | Punch unit | Multi-function controller board | Print server card | PS3 expansion kit | Network scanner expansion kit | Facsimile expansion kit | Fax memory (8 MB) | Power supply unit | Hard disk drive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Related for scanner feature | | | | | | | | | | | | | | | | | | | | | | | |
| B/W scanner module/DSPF *3 | AR-EF1 | | — | ○ | × | ○*1 | | | | | | | | | | ○ | | | | | | ○ | |
| Scanner rack *3 | AR-RK1 | | ○*1 | — | × | ○*1 | | | | | | | | | | ○ | | | | | | ○ | |
| Related for paper feed unit | | | | | | | | | | | | | | | | | | | | | | | |
| Multi purpose drawer | AR-MU1 | | × | × | — | × | × | × | | × | × | | | | × | × | | | × | × | × | × | |
| Stand/3 x 500 sheet paper drawer | AR-D14 | | | | × | — | × | × | | | | | | | | | | | | | | ○ | |
| Stand/MPD & 2000 sheet paper drawer | AR-D13 | | | | × | × | — | | | | | | | | | | | | | | | ○ | |
| Duplex module/bypass tray | AR-DU4 | | | | ○*1 | | | — | | × | | | | | × | × | | | | | | ○*2 | |
| Duplex module | AR-DU3 | | | | ○*1 | | | | — | | | | | | | | | | | | | ○*2 | |
| Output units | | | | | | | | | | | | | | | | | | | | | | | |
| Saddle stitch finisher | AR-FN7 | | | | × | ○*1 | | × | ○ | — | × | | × | × | | | | | | | | ○ | |
| Finisher | AR-FN6 | | | | ○*1 | | | | | × | — | × | | × | × | | | | | | | ○ | |
| Mail-bin stacker | AR-MS1 | | | | ○*1 | | | | | | × | — | | × | | | | | | | | ○ | |
| Exit tray *4 | AR-TE3 | | | | | | | ○*1 | | × | × | × | — | | × | | | | | | | | |
| Upper exit tray extension | AR-TE4 | | | | | | | | | | × | × | | — | | | | | | | | | |
| Punch unit | AR-PN1 | | | | × | ○*1 | | × | ○ | ○ | × | | × | | — | | | | | | | ○ | |
| Related for extension of functions and others | | | | | | | | | | | | | | | | | | | | | | | |
| PS3 expansion kit | AR-PK1 | | | | | | | | | | | | | | | | — | | | | | | |
| Network scanner expansion kit | AR-NS2 | | ○*1 | ○ | × | ○*1 | | | | | | | | | | ○ | ○ | | — | | | | |
| Facsimile expansion kit | AR-FX5 | | ○*1 | ○ | × | ○*1 | | | | | | | | | | ○ | | | | — | | | |
| Fax memory (8 MB) | AR-MM9 | | ○*1 | ○ | × | ○*1 | | | | | | | | | | ○ | | | | ○ | — | ○ | |
| Power supply unit | AR-DC1 | | | | | | | | | | | | | | | | | | | | | — | |
| Hard disk drive | AR-HD3 | | | | | | | | | | | | | | | | | | | | | | — |
| Multi-function controller board *3 | AR-M11 | | ○*1 | ○ | × | ○*1 | | | | | | | | | | — | | | | | | | |
| Print server card | AR-NC5J | | | | | | | | | | | | | | | | — | | | | | | |

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard

# [3] SPECIFICATIONS

## 1. Basic Specification

### A. Base Engine (AR-M350/M450)

#### (1) Form

| | |
|---|---|
| AR-M350/AR-M450 | Console type |

#### (2) Engine speed

| Paper size | AR-M350 | AR-M450 |
|---|---|---|
| A4, 8.5" x 11" | 35ppm | 45ppm |
| A5R/5.5" x 8.5"R | 35ppm | 45ppm |
| B5 | 35ppm | 45ppm |
| B4/8.5" x 14 | 20ppm | 22ppm |
| A3/11" x 17" | 17ppm | 20ppm |

#### (3) Engine composition

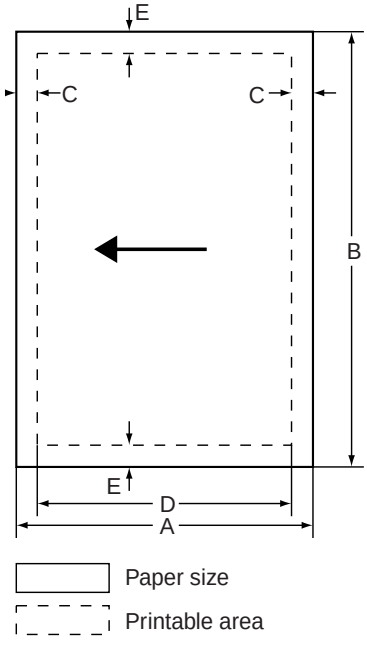
| | |
|---|---|
| Photoconductor type | OPC (diameter of photoconductor : ø30mm) |
| Record method | Electrophotograph (laser) |
| Development method | Dry-type dual-component magnetic brush development |
| Charge method | Charged saw-tooth method |
| Transfer method | Transfer roller |
| Cleaning method | Counter blade |
| Fusing method | Heat roller |
| Used toner disposal | Toner recycling system |

#### (4) Engine resolution

| | |
|---|---|
| Resolution | Write :600dpi |
| Smoothing | Write :1200dpi equivalent |
| Gradation | Write :2 levels |

#### (5) Printable area

The print area of this product is shown below.




If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

| Paper size | A | B | C | D | E |
|---|---|---|---|---|---|
| A3 | 297 | 420 | 4 | 289 | 4 |
| B4 | 257 | 364 | 4 | 242 | 4 |
| A4 | 210 | 297 | 4 | 202 | 4 |
| B5 | 182 | 257 | 4 | 168 | 4 |
| A5 | 148 | 210 | 4 | 140 | 4 |
| Japanese postcard | 100 | 148 | 4 | 92 | 4 |
| Ledger | 279 | 432 | 4 | 271 | 4 |
| Legal | 216 | 356 | 4 | 208 | 4 |
| Foolscap | 216 | 330 | 4 | 208 | 4 |
| Letter | 216 | 279 | 4 | 208 | 4 |
| Executive | 184 | 267 | 4 | 183 | 4 |
| Invoice | 140 | 216 | 4 | 132 | 4 |
| Com-10(envelope) | 105 | 241 | 4 | 97 | 4 |
| C5(envelope) | 162 | 229 | 4 | 154 | 4 |
| Monarch(envelope) | 98 | 191 | 4 | 90 | 4 |
| DL(envelope) | 110 | 220 | 4 | 102 | 4 |
| ISO B5(envelope) | 176 | 250 | 4 | 168 | 4 |

#### (6) Warm-up

| | |
|---|---|
| Warm-up time | less than 80 seconds |
| Pre-heat requirement | Required |
| Jam recovery time | Target: about 30 seconds<br>(Under standard condition of 60 seconds left after side cover opening, polygon motor halt) |

#### (7) Power source

| | | |
|---|---|---|
| Voltage | 100V system | 200V system |
| | 100-127V | 220-240V |
| Frequency | 50/60Hz | 50/60Hz |
| Power cord | | |

#### (8) Power consumption

| | AR-M350 | AR-M450 |
|---|---|---|
| Max. Power consump. | 1350W | 1350W |
| Average waiting mode | 1200W | 1200W |

#### (9) Energy Star benchmark

| | AR-M350 | AR-M450 |
|---|---|---|
| Low power mode | 40W | 75W |
| Transition time to Low power mode | 60min | 60min |

#### (10) Noise

| | AR-M350 | AR-M450 |
|---|---|---|
| At working | less than 6.7B | less than 6.7B |
| At waiting mode | less than 4.8B | less than 4.8B |

* Showing noise benchmark in each model as a whole system.

#### (11) Dimensions

| | |
|---|---|
| External dimensions (WxDxH) | 428x552x469 (Only main unit) (mm)<br>16.9"x21.7"x18.5" |
| Occupied space dimensions (WxD) | 963x685 (mm) *1<br>25.7"x22.3" |
| Weight | Approx.39kg (Only main unit)<br>Approx.99kg *1 |

*1: with B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

## B. Document Feeding Equipment

### (1) One-drawer tray (included in the base engine)

| | | |
|---|---|---|
| Paper feed method | One-drawer tray | |
| Sizes to be fed | A4, B5, 8.5" x 11" | |
| Paper capacity | 500 sheets (at 80g/m²) | |
| Media available for paper feeding | Plain paper 60 - 105g/m², 16 - 28lbs | |
| Paper type | Plain, recycled, pre-printed, pre-punched, color, letter head | |
| Paper size switching | To be switched by user (paper size to be entered from the operation panel). | |
| Dehumidification heater | Not provided | |
| Balance detection | Provided (paper empty and 3 steps) | |
| Default size setting | 100V system | 200V system |
| | 8.5" x 11" | A4 |
| Mounting/demounting of the tray | Provided | |

## C. Output Equipment

### (1) Face-down Exit Tray (included in the base engine)

| | |
|---|---|
| Output position/ method | Face-down output at the upper side of main unit |
| Output paper capacity | 400 sheets (80g/m² sheet) |
| Output paper size | A3, B4, A4, A4R, B5, B5R, A5R<br>11 " x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11 ", 8.5" x 11 "R, 5.5" x 8.5"R<br>Executive, postal card, Monarch (98 x 191)<br>Com-10 (105 x 241), DL (110 x 220),<br>C5 (162 x 229), ISO B5 (176 x 250) |
| Spec of media for paper output | Tracing paper : 52 ~ 59g/m² / 14 ~ 15lbs<br>Plain paper : 60 ~ 128g/m² / 16 ~ 34lbs<br>Index paper : 176g/m² / 47lbs<br>Cover paper : 205g/m² / 54 ~ 55lbs<br>Transparency firm |
| Remaining paper detection | Not provided |
| Exit tray full detection | Provided |

# 2. Specific Function

## A. Printer Function

### (1) Platform

IBM PC/AT (Include compatible machine)
Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the AR-PK1 is required.

### (2) Support OS

| | |
|---|---|
| Custom PS | Windows 95/98/Me |
| | Windows NT 4.0<br>Windows 2000 |
| | Mac OS 7.6 to Mac OS 9 |
| Custom<br>PCL5e/6(XL)<br>SPDL | Windows 95/98/Me |
| | Windows NT 4.0<br>Windows 2000 |
| PPD | Windows 95/98/Me |
| | Windows NT 4.0<br>Windows 2000 |
| | Mac OS 8.5.1 - Mac OS 9 |

* For Macintosh OS, the AR-PK1 is required.

### (3) PDL emulation

PCL6 compatible, PCL5e compatible,
PostScript Level 2 compatible, PostScript 3 compatible

### (4) Print Function

#### a. General

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Copies | 1 - 999 | 1 - 999 | 1 - 999 | 1 - 999 |
| Orientation | Yes | Yes | Yes | Yes |
| Duplex print | Yes | Yes | Yes | Yes |
| Saddle stitch | Yes | Yes | No | N/A |
| Binding edge | Left/top/ right | Left/top/ right | Long/short | Long/short |
| N-up | 2/4/6/8 | 2/4/6/8 | 2/4*3*4 | 2/4/6/9/16 |
| N-up direction | Fixed | Fixed | Fixed | Selectable |
| N-up border line | Yes | Yes | Yes(always) | Yes |

#### b. Paper input

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Paper size | Yes | Yes | Yes | Yes |
| Custom paper size | 1 size | 1 size | 3 sizes*3*5 | N/A |
| Source selection | Yes | Yes | Yes | Yes |
| Different first page | Yes | Yes | N/A | Yes |
| Transparency inserts | Yes | Yes | N/A | Yes |

#### c. Paper output

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Output tray selection | Yes | Yes | Yes | Yes |
| Mail bin | Yes | Yes | Yes | Yes |
| Staple | Yes | Yes | Yes | Yes |
| Offset | Yes | Yes | Yes | Yes |
| Punch | Yes | Yes | Yes | Yes |

#### d. Graphic

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Resolution | 600/300 dpi | 600 dpi | 600 dpi | 600 dpi |
| Halftone | N/A | Yes | Yes | N/A |
| Graphic mode | Yes | N/A | N/A | N/A |
| Smoothing | Yes | Yes | Yes | Yes |
| Toner save | Yes | Yes | Yes | Yes |
| Photo enhancement | Yes*8 | Yes | N/A | N/A |
| Negative image | N/A | Yes | Yes | Yes |
| Mirror image | N/A | Horizontal/ vertical | Horizontal | Yes |
| Zoom | N/A | N/A | Yes | Yes |
| Fit to page | Yes | Yes | N/A | N/A |

**e. Font**

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Resident font | 45 fonts | 136 fonts | 136 fonts*6 | 35 fonts |
| Download font | Bitmap TrueType, Graphic | Bitmap Type1 TrueType | Bitmap Type1 TrueType | N/A |

**f. Others**

| | | When an optional PS3 expansion kit is installed | | |
|---|---|---|---|---|
| Function | PCL5e/ PCL6 | PS | PPD (Windows) | PPD (Macintosh) |
| Watermark*7 | Yes | Yes | Yes | Yes |
| Overlay | Yes | Yes | N/A | N/A |
| Job retention*1 | Yes | Yes | N/A | Yes |
| Account control | Yes | Yes | N/A | Yes |
| Custom settings | Yes | Yes | N/A | N/A |
| Automatic configuration*2 | Yes | Yes | N/A | Yes |
| Job end notification | Yes | Yes | N/A | N/A |

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .
* 2 Functions when peripheral devices are installed.
* 3 Not supported in the Windows NT 4.0 environment.
* 4 2/4/6/9/16 is supported in the Windows 2000 environment.
* 5 Only one size is supported in the Windows 2000 environment.
* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.
* 7 This function is limited for PPD.
* 8 PCL6 only

### (5) Compatibility

| | |
|---|---|
| PCL 5e compatibility | Target for PCL5e is to be compatible with HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.<br>All the PJL commands are not necessarily included in the compatibility. |
| PCL6 compatibility | Target for PCL6 is to be compatible with HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.<br>All the PJL commands are not necessarily included in the compatibility. |
| PostScript Compatibility | Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000.<br>Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. |

## B. Expanded RAM

Installation of an expanded RAM will avoid the following status.

1) Time out error reduction
2) Spool time reduction
3) Avoidance of VM error / memory full

Use a commercially available RAM of the following specifications.
If a RAM which does not meet the specifications is installed, it may cause a trouble such as that it is not recognized or its capacity is not correctly recognized.

**<Spesification>**

| | |
|---|---|
| DIMM TYPE | 168pin 3.3V Unbuffered SDRAM DIMM Non-ECC |
| DIMM capacity | 64MByte, 128MByte, 256MByte |
| CAS LATENCY | CL=2 |
| SDRAM CLOCK | For PC100, PC133 |
| SPD | Supporting |
| Parity | Not support |
| ECC | Not support |

**<Operation-assured Memory> (As of March / 2001)**

| Manufacture | Capacity | Model name | RAM CHIP name | Note |
|---|---|---|---|---|
| Kingston Technology | 128MB | KVR133X64C3/ 128 | HYB39S64800BT -7.5 | |
| | 128MB | KVR133X64C3 -128 | D456821G-A75 -9JF | |
| | 256MB | KVR133X64C3 -256 | HY57V28820AT-H | |
| Viking Compornents | 64MB | VIK8641CL2 | µPD456841G5 -A80-9JF | |
| | 64MB | VIK8641CL2 | D456841G5-A80 -9JF | |
| | 128MB | VIK6642CL2 | TC59SM708FT-80 | |
| | 128MB | VIK6642CL2 | D4564841G5-A80 -9JF | |
| | 256MB | VIK2642CL2 | TC59SM708FT-80 | |
| Memory Card Technology | 64MB | DM864VS65804X -7G | GM72V66841XT75 | |
| | 128MB | DM1665VS65804 X-7G | HY57V64820HG | |

## C. Scanner function

### (1) Scanner function

| | |
|---|---|
| Scanner mode | Scan to E-mail (Internet FAX)<br>Scan to Server (Client PC) |

### (2) Support System

| | |
|---|---|
| Embedded server | SMTP server<br>FTP server |
| Protocol | TCP/IP |

### (3) Support Image

| | |
|---|---|
| Format | TIFF, PDF, TIFF-F |
| Compression method | Uncompressed, G3(1-dimension) *1, G4 *2<br>*1 G3 (1-dimension) = MH (Modified Huffman)<br>*2 G4 = MMR (Modified MR) |

### (4) Transmission Mode

| | |
|---|---|
| DSPF/OC transmission switching | O<br>(Switching during the reading is not feasible) |

### (5) Image Process

| | |
|---|---|
| Half tone reproduction | Equivalent to 256 levels |
| Exposure adjustment | Light / Auto / Dark |
| Quality selection | Half-tone ON/OFF |
| Resolution* | Normal ( 200x200dpi )<br>Fine ( 300x300dpi )<br>Super fine ( 400x400dpi )<br>Ultra fine ( 600x600dpi )<br>Varies with the file type/transmission method |

### (6) Original Memory

| | |
|---|---|
| Standard | Commonly use ERDH area of memory. |
| Memory expansion | Special : As per ERDH memory |

### (7) Specified Destination

| | |
|---|---|
| Specified destination | Specifying by one-touch or group |
| One-touch* | Max. 500 destinations<br>(in conjunction with the one-touch dial of FAX)<br>Max. 100 destinations can be registered for FTP and Desktop. |
| Group* | To be registered in one-touch |
| Program | O |

### (8) Specified Multiple Destinations

| | |
|---|---|
| Specified destination | Specifying by one-touch or group |
| No. of registration | Max. 300 items<br>(in conjunction with those of FAX) |
| Sequential broadcasting | O (<br>E-mail only. It is not available for FTP/Desktop.) |
| Simultaneous FAX transmission | O (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan) |

O : Available

### (9) Functions

| | | |
|---|---|---|
| Transmitting functions | Rotating transmission | O (to be matched with FAX specification) |
| | Long length original transmission | X |
| | Verification stamp function | Option |
| Report/list functions | Transmit/receive record | O |
| | Transmit/receive result | O |
| | Address/phone directory list | O |
| | Group list | O |
| | ID/sender list | O |
| | Program list | O |

## D. Copy function

### (1) Copy Speed

| | AR-M350 | | | AR-M450 | | |
|---|---|---|---|---|---|---|
| | Actual | Reduction | Enlargement | Actual | Reduction | Enlargement |
| A4, 8.5"x11" | 35 | 35 | 35 | 45 | 45 | 45 |
| A4R, 8.5"x11"R | 25 | 25 | 25 | 30 | 30 | 30 |
| A5R, 5.5"x8.5"R, Invoice-R | 35 | 35 | 35 | 45 | 45 | 45 |
| B5 | 35 | 35 | 35 | 45 | 45 | 45 |
| B5R, Exective-R | 25 | 25 | 25 | 30 | 30 | 30 |
| B4, 8.5"x14" | 20 | 20 | 20 | 22 | 22 | 22 |
| A3, 11"x17" | 17 | 17 | 17 | 20 | 20 | 20 |
| Extra, Envelope | 17 | 17 | 17 | 20 | 20 | 20 |
| Japan P/C | In case of printing on post card, engine speed can vary with system configuration, because next paper is fed after machine completely output previous page. | | | | | |

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

### (2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

| | AR-M350 | AR-M450 |
|---|---|---|
| Document glass *1 | Less than 5.3 seconds | Less than 4.6 seconds |
| DSPF | Less than 6.0 seconds | Less than 5.3 seconds |

*1 During OC/high-speed mode

### (3) Job Speed

| | AR-M350 | AR-M450 |
|---|---|---|
| S → S *1 | 33 cpm (94%) | 42 cpm (93%) |
| S → D *2 | 32 cpm (91%) | 40 cpm (88%) |
| D → D *3 | 32 cpm (91%) | 40 cpm (88%) |

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets
*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets
*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

### (4) Continuous Copy

| | |
|---|---|
| Max. multiple number | 999 pages |

### (5) Copy Ratio

| | |
|---|---|
| Copy ratio | AB series :<br>25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400%<br>Inch series :<br>25%, 64%, 77%, 100%, 121%, 129%, 400% |
| Zoom | 25 - 400%<br>25 - 200% (Copy from DSPF) |
| Independent scaling | Not provided |

### (6) Exposure/Copy Quality Process

| | |
|---|---|
| Exposure mode | Binary: Text(auto/manual), Text/photo, Photo<br>256 levels: Not provided |
| Manual steps | 9 steps |
| Smoothing | Standard |
| Toner save mode | Standard |

### (7) Copy Function

| | | |
|---|---|---|
| Function | APS | O |
| | AMS | O |
| | Paper type select | O<br>By type setting |
| | Auto tray switching | O |
| | Rotation copy | O |
| | Electronic sort | O |
| | Rotation sort | X |
| | Reserved copy | O |
| | Prior tray setting | X |
| | Recall/register of program | O |
| | Proof copy | X |
| | Preheat function | O<br>To be set up by key operator |
| | Auto power shut-off function | O<br>To be set up by the key operator program |
| | Account control | O<br>100 accounts |
| | Communication support (RIC) | O |
| | Card counter support | Only<br>provided the connector |
| | Coin vendor support | Only<br>provided the connector |
| Special function | Margin shift | O |
| | Edge erase / Center erase | O |
| | Dual page copying | O |
| | Covers | X |
| | Transparency insert | X |
| | Centering | X |
| | Multi shot (N in 1) | O (2 in 1 / 4 in 1) |
| | Pamphlet copy | O |
| | 2-sided copy orientation change | O |
| | Large capacity original mode | 0 (Max. 140 pages) |
| | B/W reverse | X |
| | Shading | X |
| | Mirror image | X |
| | Repeat | X |
| | Date stamp | X |
| | Stamp | X |
| | Page stamp | X |
| | Zaurus print | X |

O : Standard Function

X : Not provided

## 3. B/W Scanner Module (DSPF)

### (1) Form

Scanner (Document glass) / DSPF standard
Operation panel integral type
(common hardware for all the destinations)

### (2) Destination judgment

When connected with a base engine, the type (Japan domestic 100V, overseas 100V or overseas 200V systems) is detected and the settings will accordingly be changed.

### (3) Resolution / Gradation

| | | | | | |
|---|---|---|---|---|---|
| Reading resolution (dpi) | Copy mode | | | | |
| | Magnification | 25~99 | 100 | 101~200 | 201~400 |
| | OC | 600x600 | 600x600 | 600x600 | 600x600 |
| | OC (High speed): | 600x600 | 600x300 | 600x600 | 600x600 |
| | DSPF/ SPF(standard) | 600x300 | 600x300 | 600x600 | - |
| | DSPF/SPF (high quality) | 600x600 | 600x600 | 600x600 | - |
| Input and transmitting resolution (dpi) | FAX transmit mode | | | | |
| | Selection mode | Standard | Fine | Super fine | Ultra fine |
| | Input resolution: OC | 600x391.2 | 600x391.2 | 600x391.2 | 600x391.2 |
| | Input resolution: DSPF | 600x300 | 600x300 | 600x300 | 600x300 |
| | Transmitting resolution | 203.2x97.8 | 203.2x195.6 | 203.2x391 | 406.4x391 |
| | Scanner mode | | | | |
| | Selection mode | Standard | Fine | Super fine | Ultra fine |
| | Input resolution: OC | 600x391.2 | 600x391.2 | 600x391.2 | 600x600 |
| | Input resolution: DSPF | 600x300 | 600x300 | 600x300 | 600x300 |
| | Transmitting resolution | 200x200 | 300x300 | 400x400 | 600x600 |
| Reading level | 256 tones | | | | |
| Exposure lamp | Electrodeless xenon lamp | | | | |
| Output level | Binary | | | | |

### (4) Document Glass

| | | |
|---|---|---|
| Reading area | 297x431.8(mm)<br>11.7"x17" | |
| Original alignment | Left edge / Rear corner alignment | |
| Original size detection | Provided<br>(Standard size only) | |
| Sizes to be detected | Automatic (one detection unit to be used with software modification by destination) | |
| | Inch-1<br>(Default at overseas 100V base engine) | 11"x17", 8.5"x14", 8.5"x11", 8.5"x11"R, 5.5"x8.5" |
| | Inch-2 | 11"x17", 8.5"x13", 8.5"x11", 8.5"x11"R, 5.5"x8.5" |
| | AB-1(Default at Japan domestic 100V / overseas 200V base engines) | A3, B4, A4, A4R, B5, B5R, A5A3, B4, A4, A4R, A5 |
| | AB-2 | A3, A4R, A5, 216x330 mm |

| | | |
|---|---|---|
| OR guide display | Rear left side (Print display) | Original reference position "⇒" |
| | Left side OR guide (Print display) | (From the Interior side) [5-1/2]•[A5E]•[B5E]•[A4E/A5]• [8.5"]•[B4/B5]•[11"]•[A3/A4] |
| | Interior side OR guide (Print display) | (From the left side) [5-1/2]•[A5]•[B5]•[A4/A5E]• [8-1/2]•[B5E]•[11"]•[A4E]•[13"]• [14"]•[B4]•[A3]•[17"] |
| | Interior side OR guide | Book marks are at A4 and 8-1/2 positions. |
| | The position available to attach the staple position guide label when the optional finisher (desktop console type) is equipped. | |

**(5) DSPF/SPF**

| | | |
|---|---|---|
| Type | DSPF | One-scan-dual-side scanning method DSPF with OC integrated |
| Scan speed | Standard mode | 45 opm |
| | High quality mode | 22.5 opm |
| Original alignment | Center alignment | |
| Original size | A3, B4, A4, A4R, B5, B5R, A5, A5R11"x17", 8.5"x14", 8.5"x13", 8.5"x11", 8.5"x11"R,5.5"x8.5", 5.5"x8.5"R (in Fax mode : long-length paper up to 800mm is applicable) | |
| Original paper weight | 50~128g/m², 15~34lbs | |
| Original stack capacity | Max. 50 sheets (max. 30 sheets for A3, B4,11"x17",8.5"x14") (When, however, exceeding 105g/m² and A3, B4,11"x17",8.5"x14", max. 15 sheets) or, Total thickness less than 6.5mm (at 50~80g/m², 15~21lbs) 5.0mm (at 80~128g/m², 21~34lbs) | |
| Not transportable original type | Transparency film, secondary original paper, tracing paper, carbon paper, thermal paper, original with crumple/crimp/rip, original with attachment/clipping, original with many punch holes (with 2 or 3 holes acceptable), original preprinted with ink-ribbon. | |
| Original size detection | Provided | |
| Sizes to be detected | Automatic (one detection unit to be used with software modification by destination) | |
| | Inch-1 (Default at overseas 100V base engine) | 11"x17", 8.5"x14", 8.5"x11", 8.5"x11"R, 5.5"x8.5" |
| | Inch-2 | 11"x17", 8.5"x13", 8.5"x11", 8.5"x11"R, 5.5"x8.5" |
| | AB-1(Default at Japan domestic 100V / overseas 200V base engines) | A3, B4, A4, A4R, B5, B5R, A5, A3, B4, A4, A4R, A5, 8.5"x11", 216x330 mm |
| | AB-2 | A3, B4, A4, A4R, A5, B5, B5R, 216x330 mm, 8.5"x11" |
| Original tray guide display | Center of the tray (inscribeddisplay) | Original reference position "←" Original face-down placement indication "⎙" |
| | Original Guide (inscribed display) | (From Center) [B5E]•[A4E/A5]•[8.5"]•[B4/B5]• [11"]•[A3/A4] |
| | The position available to attach the staple position guide label when the optional finisher (desktop console type) is equipped. | |

**(6) Power Source**

| |
|---|
| Supplied from the main unit |

**(7) Dimensions**

| | |
|---|---|
| External dimensions (WxDxH) | 808 x 619x180 mm |
| Occupied space dimensions (WxD) | 945 x 619 mm (When the tray is extended) |
| Weight | Approx. 19.5 kg |

**(8) Display device at scanner part**

| | |
|---|---|
| Type | Dot map LCD, touch panel |
| Display dot number | 640 x 240 dots (dot pitch 0.24x0.24 mm) |
| LCD operating dimension | 153.5 x 57.5 mm |
| LCD back-light | Fluorescent tube method |
| LCD brightness adjustment | Provided |

**(9) Key**

| | |
|---|---|
| Mode selection area | Job status key<br>Printer mode key<br>(online display LED/data in-memory display LED)<br>Scan/Fax mode key<br>(busy display LED/data in-memory display LED)<br>Copy mode key<br>User definition key |
| Basic input area | Start key<br>CA key<br>10-key<br>Clear key<br>* key<br># key |

**(10) Touch sense method**

| |
|---|
| Resistive film method |

**(11) Used character in the LCD**

| | |
|---|---|
| Dot | 8 x 16 , 16 x 16 dots |
| Bold display | O |

## 4. Rack for Scanner

**(1) Dimensions**

| | |
|---|---|
| Strength | 60 kg |
| External dimensions (WxDxH) | 30 x 415 x 860 mm (Single goods) |
| Occupied space dimensions (WxD) | 575 x 415 mm (State of installation) (2pieces) |
| Weight | Approx.5 kg (2pieces) |

* For the items which are not specified in this Service Manual, refer to the AR-P350/P450 Service Manual.

# [4] CONSUMABLE PARTS

## 1.Supply system table

### A.USA

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450NT<br>(*1 AR-450NT-J) | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450ND | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K maintenance kit | Cleaner blade | x1 | 50K | AR-450KC1 | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K maintenance kit | Transfer roller | x1 | 100K | AR-450KA1 | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | Upper heat roller kit | Upper heat roller | x1 | 200K | AR-450UH | |
| | | Fusing separation pawl (Upper) | x4 | | | |
| 7 | Lower heat roller kit | Lower heat roller | x1 | 200K | AR-450LH | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| 8 | Cleaner blade | Cleaner blade | x10 | 50K(x10) | AR-450CB | AR-450CB=(AR-450BL)x10 |
| 9 | Cleaning roller | Cleaning roller | x10 | 200K(x10) | AR-450CR | AR-450CR=(AR-450RC)x10 |
| | | Bearing | x20 | | | |
| 10 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 11 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

### B.CANADA/Latin America

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450NT | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450ND | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

## C.Europe/Australia/New Zealand

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450T | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450DV | |
| 3 | Drum | Drum | x1 | 50K | AR-450DM | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## D.Middle East/ Africa

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450FT | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450SD | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## E.Israel/Russia/CIS/Philippines

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450FT | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450SD | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## F.Asia

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450ST | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450SD | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## G.Hong kong

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450ST-C | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450SD-C | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR-C | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:2 languages (English/Chinease).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## H.Taiwan

| NO | Name | Content | | Life | Product name | Remark |
|---|---|---|---|---|---|---|
| 1 | Toner CA(Black) | Toner(Toner : Net Weight 814g) | | 27K | AR-450FT-T | *Life setup is based on A4 6% |
| 2 | Developer | Developer(Developer : Net Weight 450g) | | 100K | AR-450SD-C | |
| 3 | Drum | Drum | x1 | 50K | AR-450DR-C | |
| 4 | 50K PM kit | Cleaner blade | x1 | 50K | AR-450KC | |
| | | Drum separation pawl | x4 | | | |
| | | Screen grid | x1 | | | |
| | | Toner reception seal | x1 | | | |
| | | Side malt F | x1 | | | |
| | | Side malt R | x1 | | | |
| | | Charging plate | x1 | | | |
| 5 | 100K PM kit | Transfer roller | x1 | 100K | AR-450KA | |
| | | Discharging plate | x1 | | | |
| | | Paper dust removing unit | x1 | | | |
| | | DV blade | x1 | | | |
| | | DV side seal F | x1 | | | |
| | | DV side seal R | x1 | | | |
| 6 | 200K PM kit | Upper heat roller | x1 | 200K | AR-450KB | |
| | | Lower heat roller | x1 | | | |
| | | Fusing separation pawl (Upper ) | x4 | | | |
| | | Fusing separation pawl (Lower) | x2 | | | |
| | | Cleaning roller | x1 | | | |
| | | Bearing | x2 | | | |
| 7 | Staple cartridge | Staple cartridge | x3 | 3000x3 | AR-SC1 | Common with cartridge for AR-FN4 & AR-FN6 |
| 8 | Staple cartridge | Staple cartridge | x3 | 5000x3 | AR-SC2 | Common with cartridge for AR-FN7 |

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

## 2.Production number identification

### A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

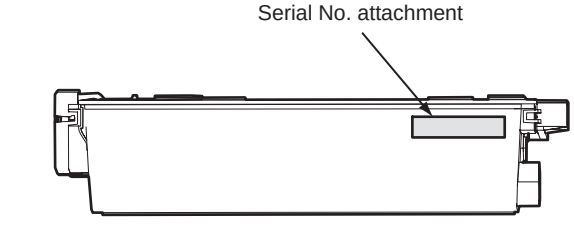
1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. T for this model.
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

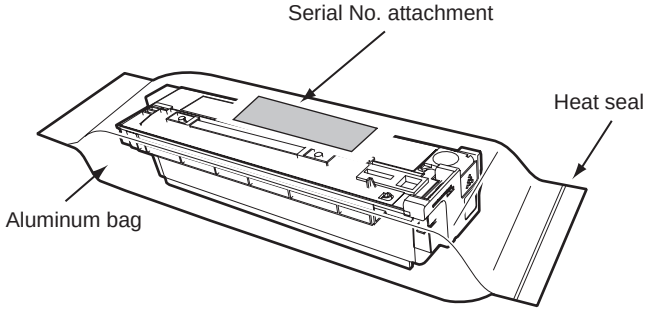
### B. Toner cartridge

The lot number is of 7 digits, and each digit indicates as follows.
The lot number shall be printed in the position shown in the figure.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

1 Version number (A - sequentially revised)
2 Numeral figure
Indicates the end digit of the production year.
3 Alphabet
Indicates the production factory. (B for SOCC)
4 Destination code
5,6 Numeral figures
Indicates the production day.
7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.




### C. Developer cartridge

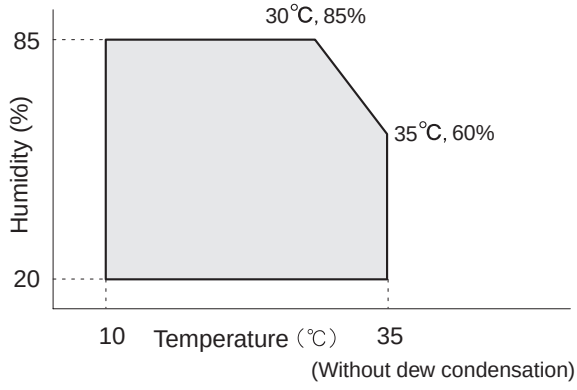
The lot number is of 10 digit, and each digit indicates as follows.
The lot number shall be printed on the bag.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. T for this model.
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

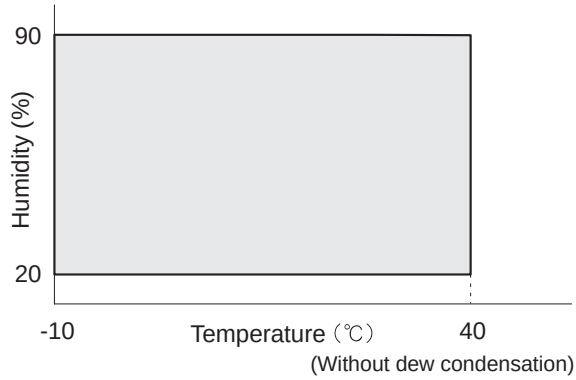
## 3. Environmental conditions

### A. Operating conditions




(Without dew condensation)

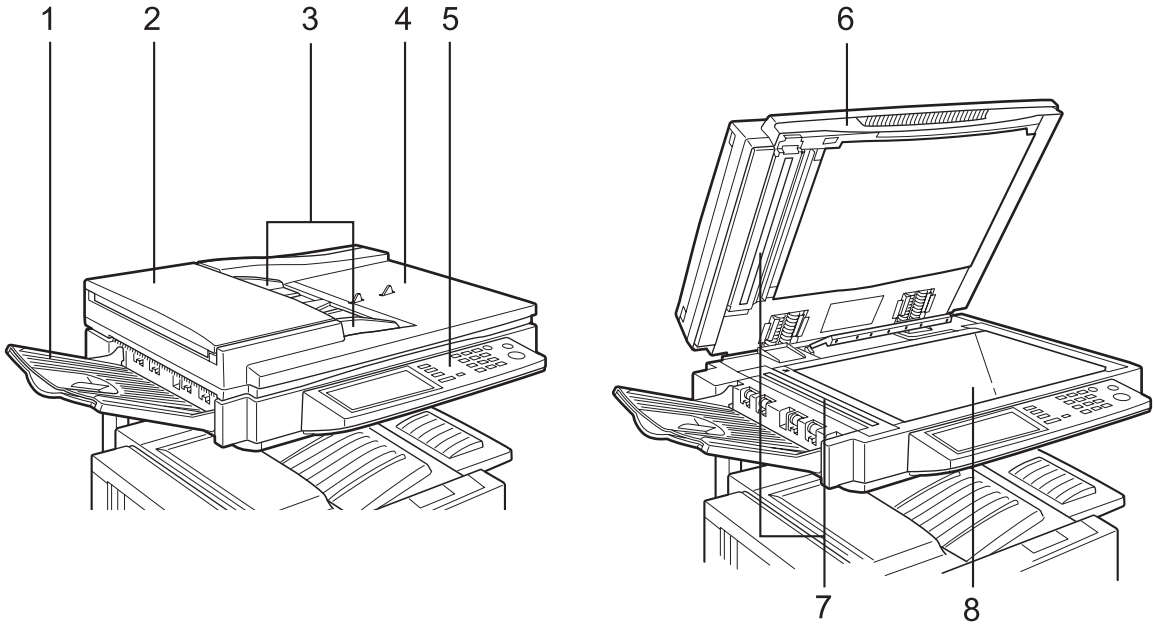
### B. Storage conditions




(Without dew condensation)

# [5] EXTERNAL VIEWS AND INTERNAL STRUCTURES

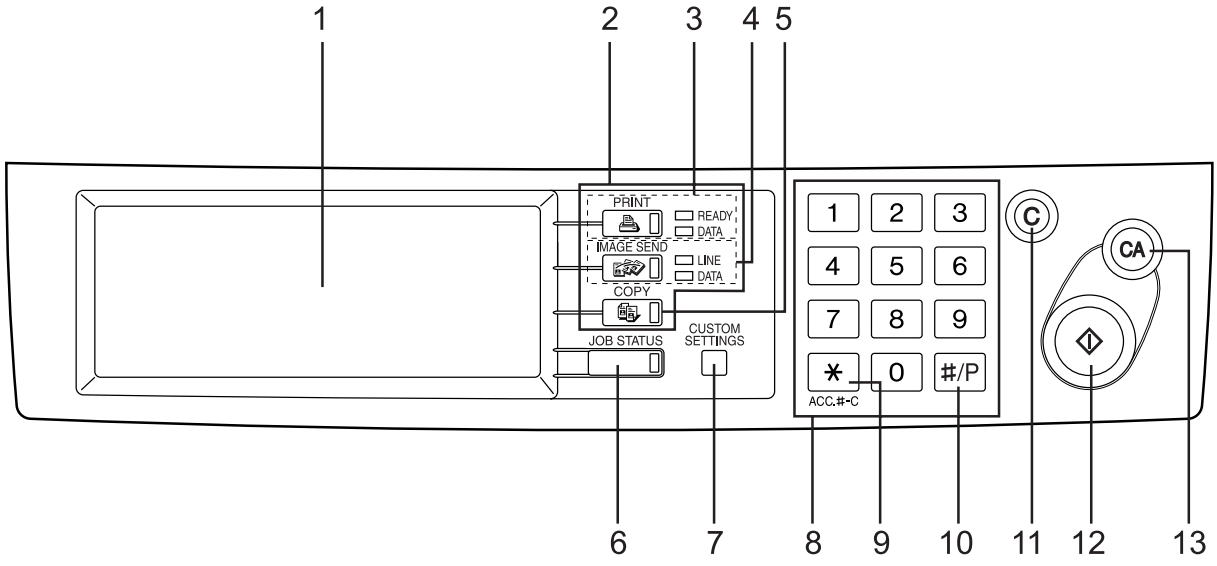
## 1. Appearance




| | | |
|---|---|---|
| 1 | DSPF exit area | Scanned originals are deposited here. |
| 2 | Document feeding area cover | Open to remove misfeed originals in this area. |
| 3 | Original guides | Adjust to the size of the originals. |
| 4 | Document feeder tray | Set the originals here for automatic feeding. |
| 5 | Operation panel | Use for operation of copier, network scanner, and facsimile features and for printer configuration operations. |
| 6 | Document cover | |
| 7 | Document scanning windows | Sheet type originals are scanned here. |
| 8 | Document glass | All originals which cannot be copied from the document feeder tray must be copied here. |

## 2. Operation panel

When the printer is equipped with a scanner module, the operation panel on the main unit will become inoperative and the panel on the scanner module must be used.
The operation panel on the printer engine side does not function.

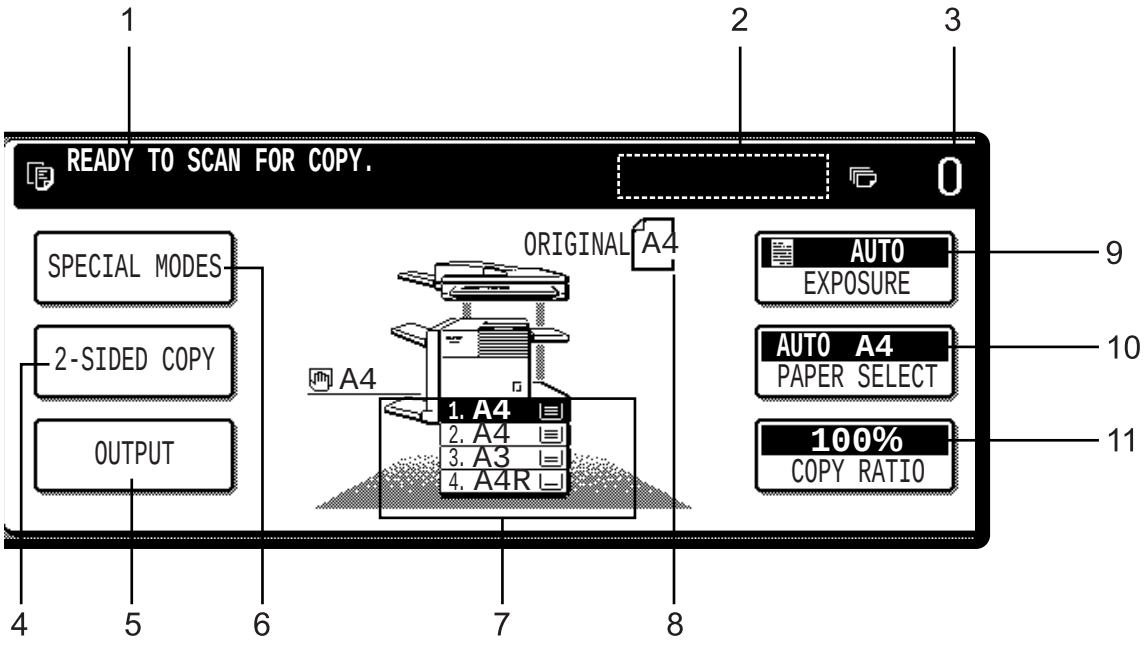



| | | |
|---|---|---|
| 1 | Touch panel | The machine status, messages and touch keys are displayed on the panel. The display will change to show the status of print, copy, network scan or fax according to which of those modes is selected. |
| 2 | Mode select keys and indicators | Use to switch the display mode of the touch panel. |
| 3 | [PRINT] key/<br>READY indicator/<br>DATA indicator | Press to enter the print mode.<br>•READY indicator<br>Print data can be received when this indicator is lit.<br>•DATA indicator<br>Lights up or blinks when print data is being received. Also lights up or blinks when printing is being performed. |
| 4 | [IMAGE SEND] key/<br>LINE indicator/<br>DATA indicator | Press to enter the network scan/fax mode.<br>•LINE indicator<br>During sending or receiving FAX data or scan data, this lamp is lighted.<br>•DATA indicator<br>Lights up or blinks when FAX data is being received. Also lights up or blinks when printing is being performed. |
| 5 | [COPY] key | Press to select the copy mode and display the basic screen of the copy mode.<br>Even when the machine is busy in another mode, the basic copy mode screen will appear when the [COPY] key is pressed.<br>If this key is pressed and held while the basic screen of the copy mode is displayed, the total output count and the quantity of toner remaining (percentage) will be displayed. |
| 6 | [JOB STATUS] key | Press to display the current job status. |
| 7 | [CUSTOM SETTINGS] key | Use to adjust the contrast of the touch panel or to set key operator programs. |
| 8 | Numeric keys | Use to enter number values for various settings. |
| 9 | [*] key ([ACC.#-C] key) | If the auditing mode has been set, press this key to close an open account after finishing a copy, facsimile scanning or network scanning job. |
| 10 | [#/P] key* | Press to select the job memory mode. |
| 11 | [C] key* | Press to clear a copy quantity entry.<br>If this key is pressed while the automatic document feeder is being used, any originals in progress will be automatically output. |
| 12 | Start key* | When the indicator is lit, copying, facsimile scanning and network scanning jobs can be started.<br>Press to start copying. |
| 13 | [CA] key* | Press to clear all selected settings and return the machine to the initial settings for the currently selected mode. Before starting a copy operation, press the [CA] key first. |

# 3. Touch Panel

## A. basic screen of copy mode

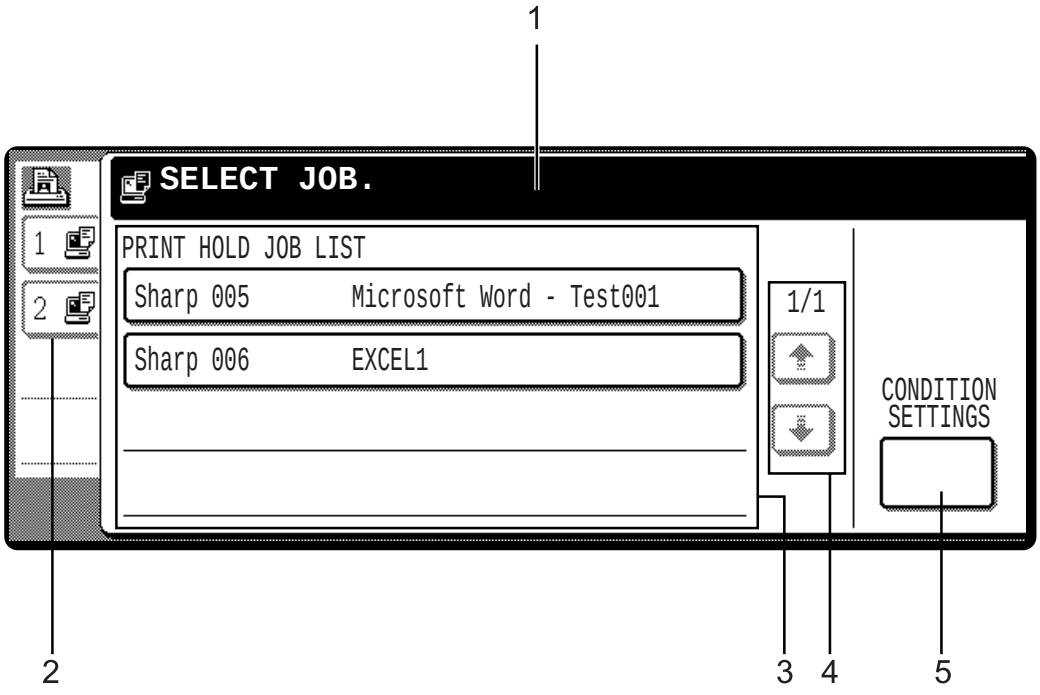
When the copy mode key is pressed, this display screen will appear showing the basic copy mode selections.




| | | |
|---|---|---|
| 1 | Message display | Basic status messages are displayed here. |
| 2 | [INTERRUPT] key display area | When interrupt copy is available, the [INTERRUPT] key will be displayed here.<br>When an interrupt copy job is being run, a [CANCEL] key will be displayed here to be used for canceling the interrupt copy job. |
| 3 | Copy quantity display | Displays the selected number of copies before the [START] key is pressed or the number of completed copies after the [START] key is pressed.<br>A single copy can be made when "0" displayed. |
| 4 | [2-SIDED COPY] key | Touch to display the duplex copy mode setting screen. A highlighted selection on the screen will indicate the currently selected mode. The setting screen can be closed by touching the [OK] key on the setting screen whether or not a selection change was made. |
| 5 | [OUTPUT] key | Touch to display the output mode setting screen. A highlighted selection on the screen will indicate the currently selected mode. The setting screen can be closed by touching the [OK] key on the setting screen whether or not a selection change was made. |
| 6 | [SPECIAL MODES] key | Touch to display the special modes selection screen. |
| 7 | Paper size display | The display shows the location of the paper trays, the size of the paper in the trays and the approximate amount of paper loaded in each tray. The approximate amount of paper in a tray is indicated by . |
| 8 | Original size display | The original paper size will be displayed when originals are placed on the document glass or in the document feeder. |
| 9 | Exposure display and [EXPOSURE] key | A touch of the [EXPOSURE] key will open the exposure selection window.<br>A highlighted key on the exposure window indicates which exposure mode (AUTO, TEXT, TEXT/PHOTO or PHOTO) is currently selected. When an exposure mode other than AUTO is selected, an exposure level scale will also appear in the window. |
| 10 | Paper select display and [PAPER SELECT] key | Displays the selected paper size. When the auto paper select mode has been selected, "AUTO" will be displayed.A touch of the [PAPER SELECT] key will open the paper selection window. When a selection is made, the selection window will close. To close the window without making a selection touch the key again |
| 11 | Copy ratio display and [COPY RATIO] key | Displays the selected copy ratio. Touch to display the reduction and enlargement copy ratio selection screen. |

### B. Print mode screen

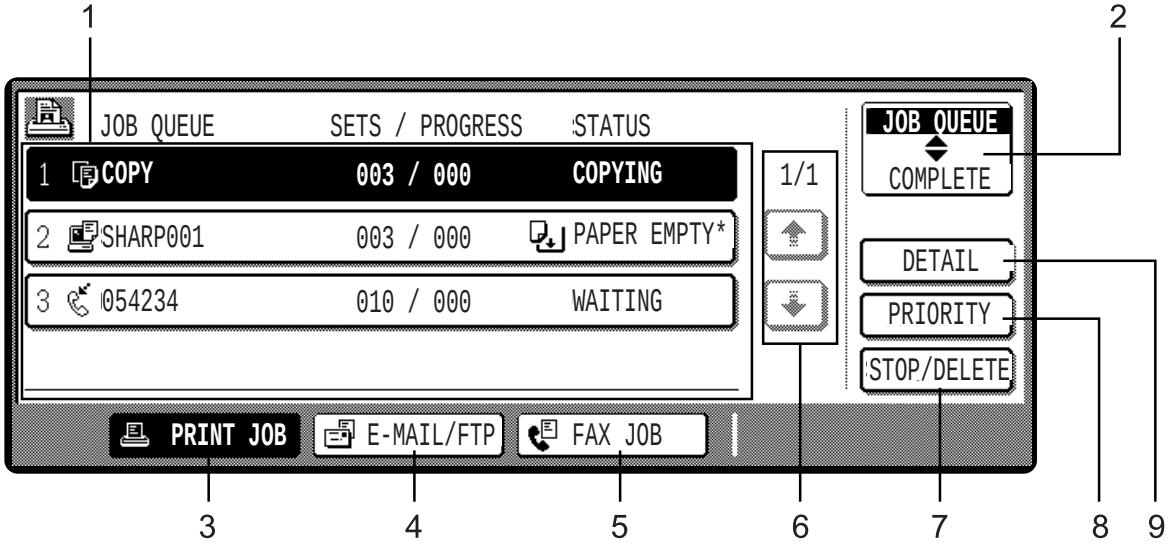
This screen is displayed when the print mode is selected.
(The display varies with the mode. For the display in other modes)




| | | |
|---|---|---|
| 1 | Message display | A message is displayed in this column. |
| 2 | Job status screen | Refer to the text. |
| 3 | Print hold job list | If the job retention function is used, the list of stored print jobs is displayed here (up to 100 jobs).<br>The job retention function can be used only if the printer is equipped with a hard disk drive unit. If the main switch is turned off, stored print data will be cleared. |
| 4 | Display scroll keys | Use these keys to view the job hold list when it is contained on more than one screen. |
| 5 | [CONDITION SETTINGS] key | Use to switch the display to the printer configuration menu. |

### C. Job status screen (common to print, copy, network scan, and fax modes)

This screen is displayed when the [JOB STATUS] key on the operation panel is pressed.
A job list showing the current job at the top of the job queue or a list showing completed jobs can be displayed.
The contents of the jobs can be viewed, moved up to the highest priority in the job queue or deleted from the queue.

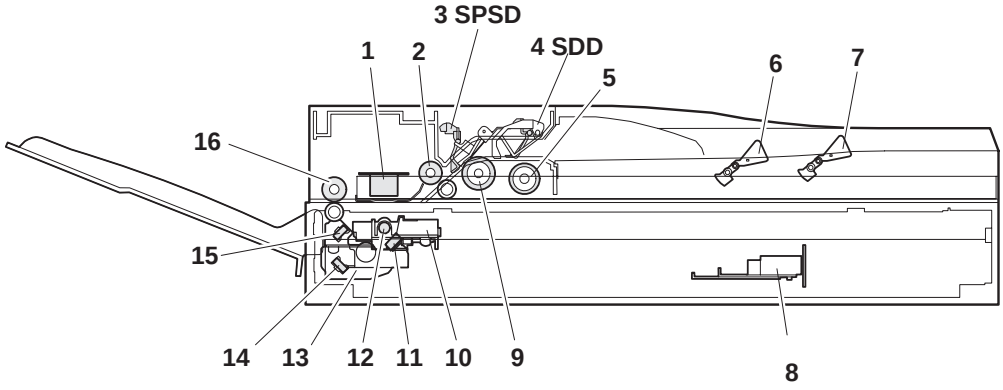



| | | |
|---|---|---|
| 1 | Job list | A job list which indicates the current job and reserved jobs or a job list which indicates completed jobs is displayed. The icons to the left of the jobs in queue represent the job mode.<br>Print mode / Copy mode<br>Network scan mode<br>Fax mode (transmission job) / Fax mode (reception job)<br>When a job list which indicates the current job and reserved jobs is displayed, the displayed jobs themselves are operation keys. To cancel printing or to give a job the highest print priority, touch the relevant job key to select the job and execute the desired operation using the keys described in 7,8, and 9 |
| 2 | Mode switching key | Use to switch the job list between "JOB QUEUE" and "COMPLETE".<br>"JOB QUEUE": Displays the list of the current job and the reserved jobs.<br>"COMPLETE": Displays the list of completed jobs. |
| 3 | [PRINT JOB] key | Use to display the print job list for all modes (print, copy, network scan, and fax). |
| 4 | [E-MAIL/FTP] key | Use to display the list of jobs that use the network for sending e-mail by SNMP protocol or sending to an ftp site or desktop by ftp protocol. |
| 5 | [FAX JOB] key | Use to display the fax communication status and the reserved transmission job status. |
| 6 | Display switching keys | Use to switch the page of the displayed job list. |
| 7 | [STOP/DELETE] key | Use to cancel or delete the current job or delete the selected reserved job. Received fax print jobs that have been reserved, however, cannot be deleted. |
| 8 | [PRIORITY] key | If you select a job among the reserved jobs in the "JOB QUEUE" job list to which you wish to give the highest priority and touch this key, the job will move to the highest priority reserved job. |
| 9 | [DETAIL] key | Use to display the detailed information of the selected job. The paper size for printing can be changed from the specified size.This function, however, cannot be used when a fax reception print job is selected. |

* "PAPER EMPTY" in the job status display

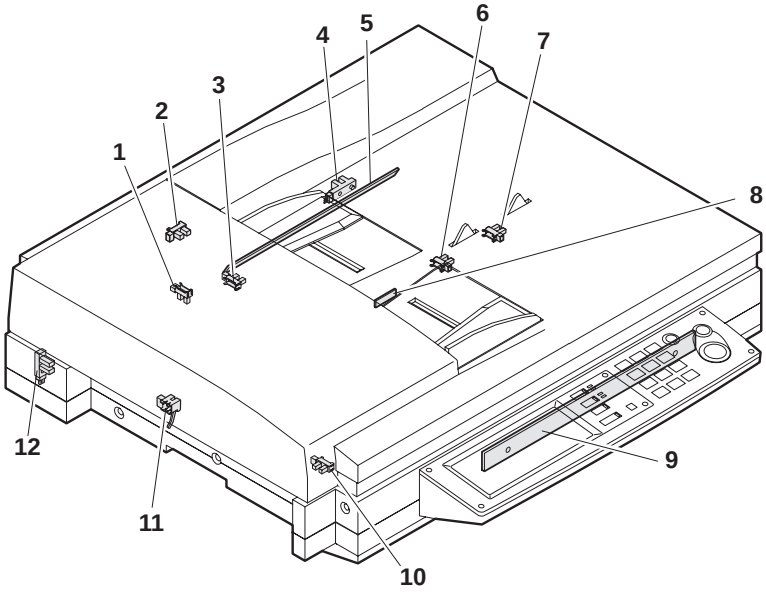
When a job status display indicates "PAPER EMPTY", the specified size paper is not loaded in any tray to run that job.
In this case, printing is suspended for that job until the required paper is loaded. Until the required paper is loaded another reserved job data will be printed if possible.
(If paper runs out during printing, another job will not be printed.) If you wish to change the paper size because you do not have the specified size paper, you can change the size by touching the current job key to select it and touch the [DETAIL] key described in 9

## 4. Cross sectional view



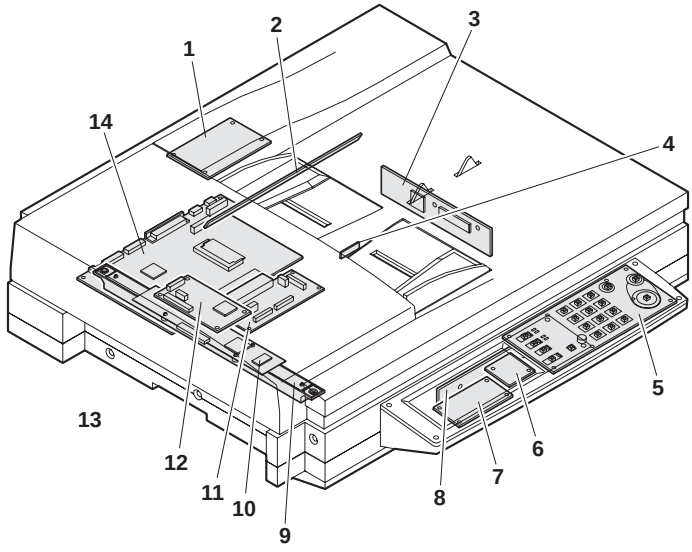

| No. | Name | No. | Name |
|---|---|---|---|
| 1 | CIS unit (AR-EF1 only) | 9 | Original feed roller |
| 2 | Original resist roller | 10 | Copy lamp base unit |
| 3 | Original resist front sensor (SPSD) | 11 | No. 1 mirror |
| 4 | Original set sensor | 12 | Copy lamp (Xenon) |
| 5 | Original take-up sensor | 13 | Mirror base unit |
| 6 | Original length sensor 1 (SLD1) | 14 | No. 3 mirror |
| 7 | Original length sensor 2 (SLD2) | 15 | No. 2 mirror |
| 8 | CCD/lens unit | 16 | Original exit roller |

## 5. Switch, Sensor



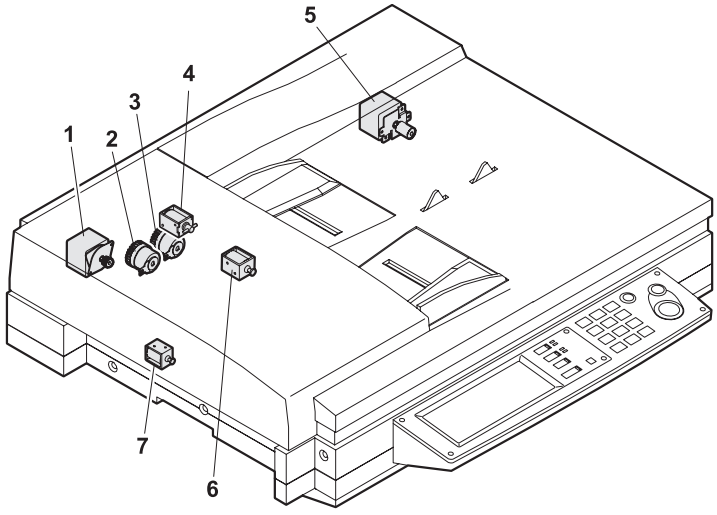

| | Code | Name | Active condition |
|---|---|---|---|
| 1 | SPSD | SPF original resist front sensor | |
| 2 | SCOV | SPF paper feed cover sensor | |
| 3 | SDD | SPF original set sensor | |
| 4 | SOCD | OC open/close sensor | |
| 5 | | Original size sensor PWB (Light emitting side) | |
| 6 | SLD1 | SPF original length sensor 1 | |
| 7 | SLD2 | SPF original length sensor | |
| 8 | | SPF original width detection volume PWB | --- |
| 9 | | Original size sensor PWB (Light receiving side) | |
| 10 | SSET | SPF open/close sensor | |
| 11 | SPOD | SPF original exit sensor | |
| 12 | MHPS | Mirror home position sensor | |

## 6. PWB




| No. | Name | Function/Operation |
|---|---|---|
| 1 | SPF control PWB | SPF control |
| 2 | Original size detection PWB (Light emitting side) | Original size detection when using the table glass |
| 3 | CCD PWB (in lens unit) (The lens unit cannot be disassembled.) | Image scan (Table glass/SPF surface) |
| 4 | SPF original width detection volume PWB | SPF original width detection |
| 5 | MFP operation PWB | Panel operation control |
| 6 | LCD inverter PWB | Inverter for LCD backlight |
| 7 | LVDS PWB | LCD signal relay |
| 8 | Original size sensor (Light receiving side) | Original size detection when using the table glass |
| 9 | CIS unit (in CIS unit) (The CIS unit cannot be disassembled.) | Image scan (SPF back surface) |
| 10 | CIS interface PWB (in CIS unit) (The CIS unit cannot be disassembled.) | CIS signal AD conversion process |
| 11 | Scanner interface PWB | Scanner unit and connection of scanner control PWB |
| 12 | CIS control PWB | CIS unit control and image process |
| 13 | CL inverter PWB | Inverter for copy lamp |
| 14 | Scanner control PWB | Scanner unit control |

## 7. Motor, Clutch, Solenoid



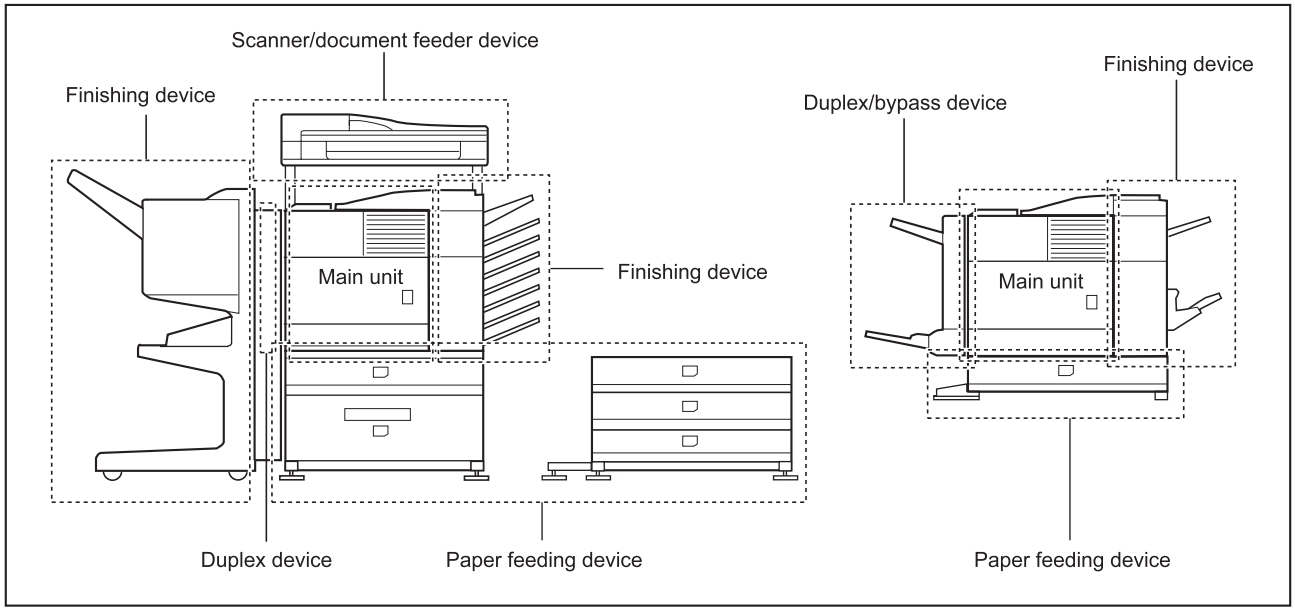

| No. | Name | | Function/Operation |
|---|---|---|---|
| 1 | SPFM | SPF motor | Original transport in SPF scan |
| 2 | SPSC | SPF original resist clutch | SPF original scan timing adjustment |
| 3 | SPFC | SPF original feed clutch | SPF original feed roller drive |
| 4 | SDSS | SPF original stopper solenoid | SPF original stopper gate drive |
| 5 | MIRM | Mirror motor | Mirror base copy lamp base drive |
| 6 | SPFS | SPF original feed solenoid | SPF original feed unit drive |
| 7 | STMPS | Stamp solenoid | Finish stamp drive (Option AR-SU1 required) |

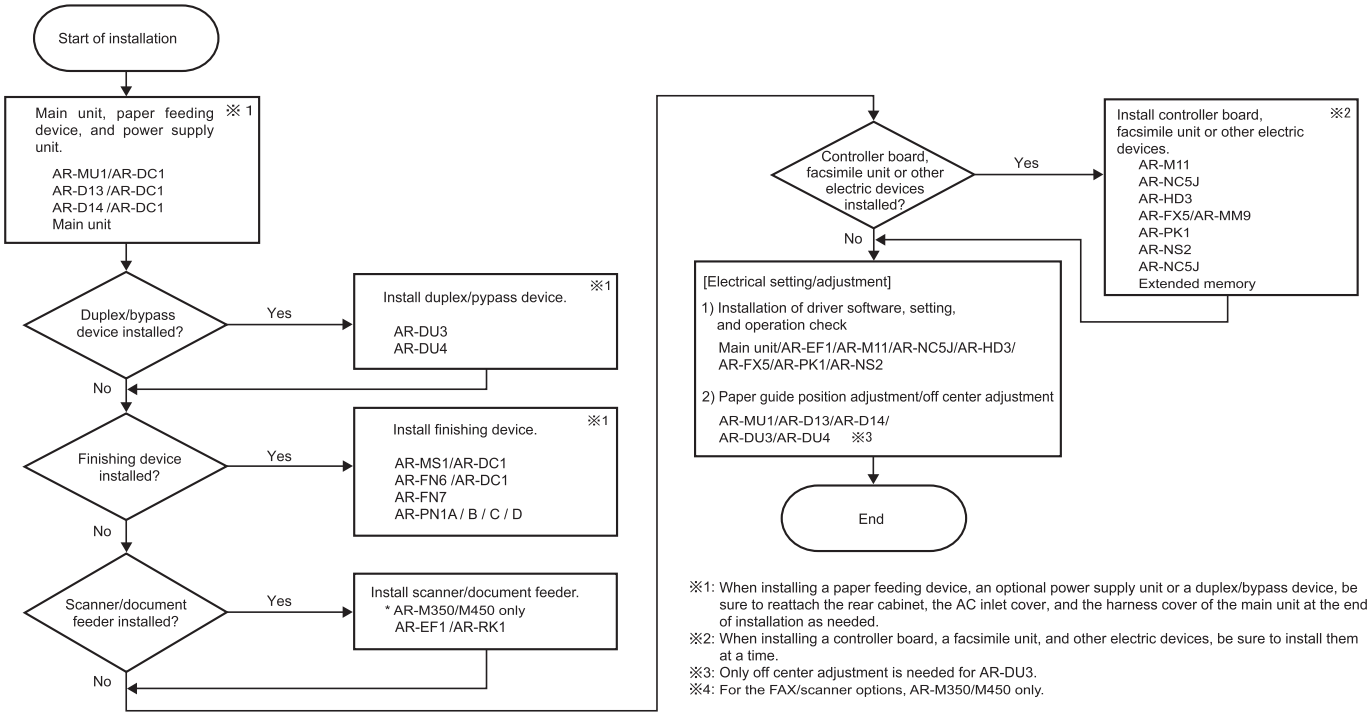
# [6] UNPACKING AND INSTALLATION

## 1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices effciently, follow the procedure below.
Some peripheral devices may have been installed as standard devices depending on the main unit model.
Part of descriptions and illustrations may be different.



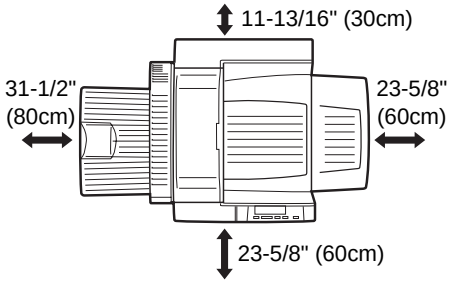

※1: When installing a paper feeding device, an optional power supply unit or a duplex/bypass device, be sure to reattach the rear cabinet, the AC inlet cover, and the harness cover of the main unit at the end of installation as needed.
※2: When installing a controller board, a facsimile unit, and other electric devices, be sure to install them at a time.
※3: Only off center adjustment is needed for AR-DU3.
※4: For the FAX/scanner options, AR-M350/M450 only.

* For installation of an option unit, refer to the Service Manual of the option unit.

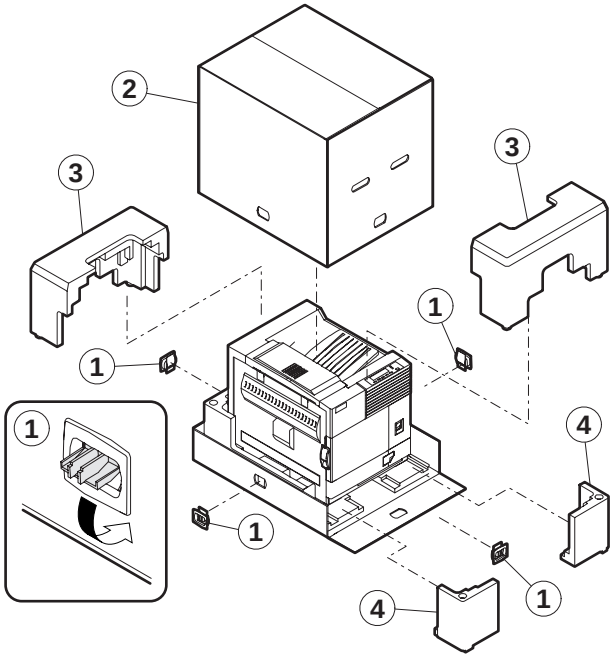
## 2. Note for installation place

Improper installation may damage this product. Please note the following during initial installation and whenever the machine is moved.

1) The machine should be installed near an accessible power outlet for easy connection.
2) Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.
   •For the power supply requirements, see the name plate of the main unit.
3) Do not install your machine in areas that are:
   •damp, humid, or very dusty
   •exposed to direct sunlight
   •poorly ventilated
   •subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.
4) Be sure to allow the required space around the machine for servicing and proper ventilation.




## 3. Unpacking procedure




Check the following items are included in the package.

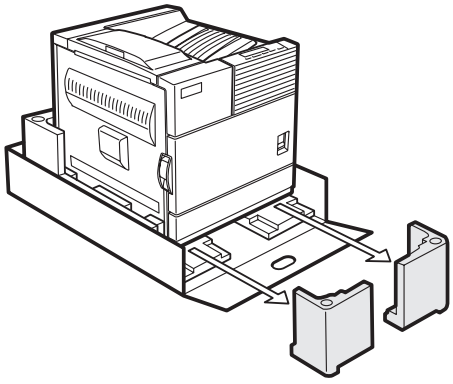
| | |
|---|---|
| Developer | |
| Toner cartridge for installation | |
| CD-ROM for AR-350/450 series printers | |
| Operating Manual | |
| Counter kit contract | |

## 4. Machine installing procedure

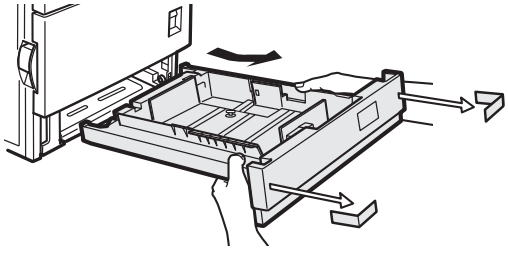
Note: In advance to installation of the machine, the paper feed option units (AR-D13 or AR-D14) should have been installed.

### A. Removal of the machine

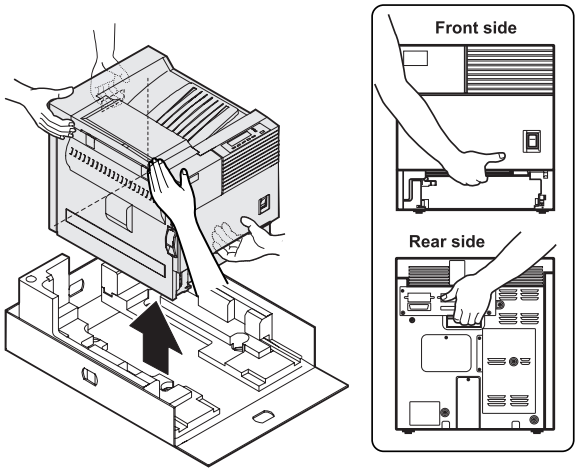
1) Remove the cushioning materials from the right and left of the front side.



2) Remove the locking tape from the right and left sidesof the tray. Then,Remove the top of the carton and lower the plastic bag covering the machine while the machine is still on the carton base.
3) Remove the packing tape from the paper tray, pull out the paper tray until it stops and remove it by tilting it upward.



4) One person must lift by the empty front tray pocket with the right hand and steady the machine with the left hand placed at the upper left of the machine.
   The other person must lift with the right hand by using the lifting recess in the rear of the machine and also steady the machine with the left hand as shown in the illustration.

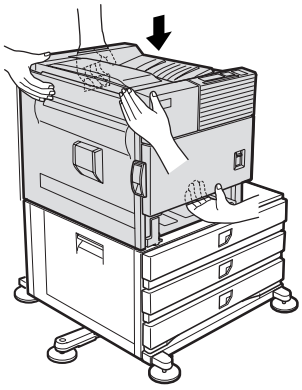



Note: The center of gravity of the machine lies in the left side when viewed from the Back of machine. When lifting the machine, be careful not to drop it.

## B. Installation of paper feed options to the machine

Note: Before use of this machine, one of the paper feed option units (AR-D13/AR-D14) should be installed to the machine for safety reasons.
Refer to the drawing of the AR-MU1 in this manual.

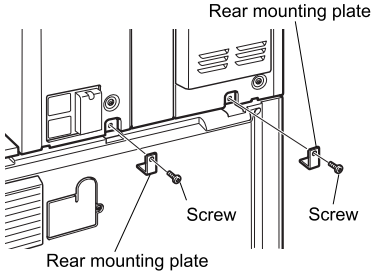
1) Put the machine on the previously installed option unit.
Be sure to check that the boss of the option unit is securely engaged with the machine and that the external lines (front and left sides) of the option unit and those of the machine are aligned completely.

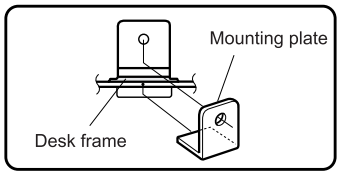


Caution: For installation of the main unit, it must be held by two persons and installed without haste.

2) Connect the main unit to the stand/paper drawer.

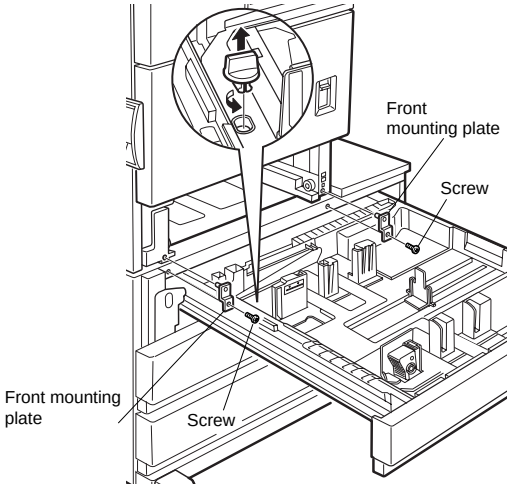
<1>Attach the rear mounting plates using a supplied screw for each.



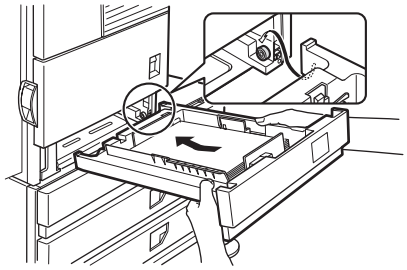




Caution: Insert the rear mounting plates under the desk frame.

<2>Pull out the upper paper tray of the stand/paper drawer until it stops and attach the front mounting plates using a supplied screw for each. Then, remove the lock of the paper tray and close the tray.
Remove the locks of the middle tray and the lower tray similarly.

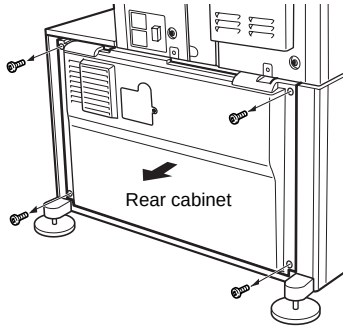



<3>Reattach the paper tray of the main unit.



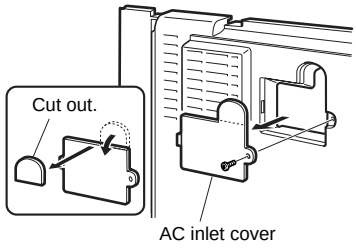
3) Remove the rear cabinet of the stand/paper drawer and remove the AC inlet cover.

<1>Remove the four screws that fix the rear cabinet and then remove the rear cabinet.

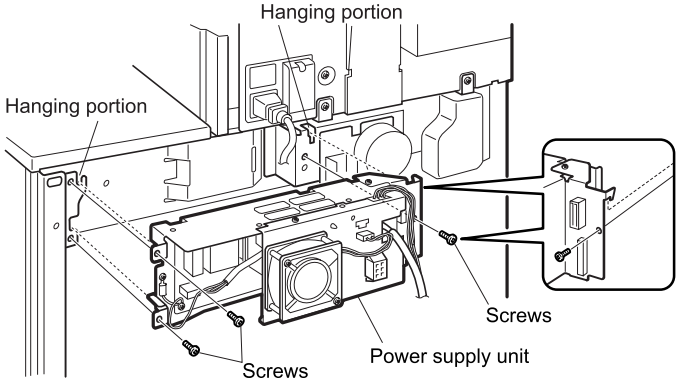



<2>Remove the screw that fixes the AC inlet cover and then remove the AC inlet cover.

<3>Process the AC inlet cover as shown in the illustration.

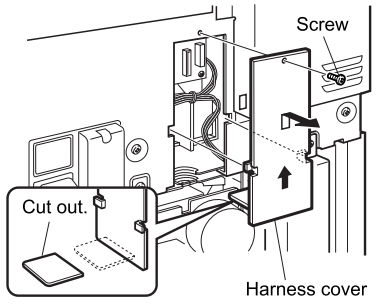



4) Attach the power supply unit (AR-DC1).
Attach the power supply unit to the hanging portions and secure it using the three supplied screws.

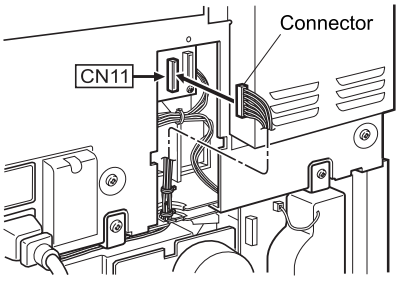


5) Connect the power supply unit harness to the PCU PWB of the main unit of the printer.

<1>Remove the screw that fixes the harness cover of the main unit of the printer and slide the harness cover up to remove it.
Process the harness cover as shown in the illustration.

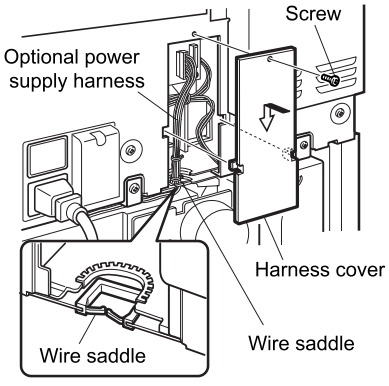



<2>Connect the optional power supply harness connector to CN11 (red connector) of the PCU PWB of the main unit of the printer.

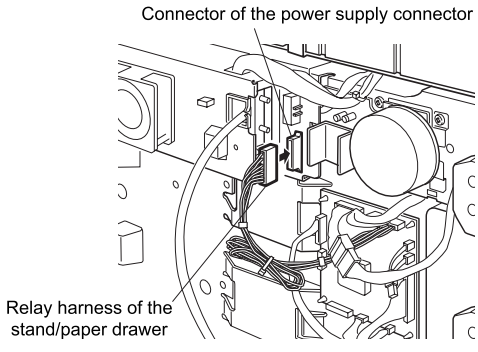



<3>Reattach the harness cover to its original position and fix it with the removed screw.
At this time, ensure that the optional power supply unit harness is arranged as shown in the illustration.

•Fix the harness securely to the wire saddle.

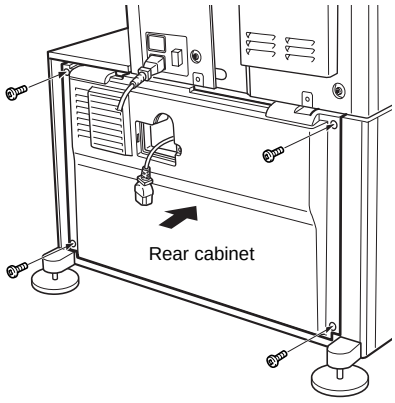



6) Connect the relay harness of the stand/paper drawer to the power supply unit.
Connect the relay harness of the stand/paper drawer to the connector of the power supply unit.

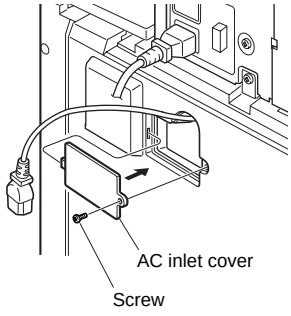



7) Attach the rear cabinet of the stand/paper drawer.

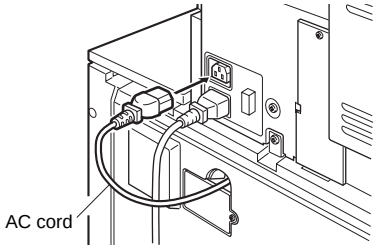
<1>Pass the cord of the power supply unit through the hole of the rear cabinet and attach the rear cabinet to the stand/paper drawer.




<2>Attach the AC inlet cover to the rear cabinet of the stand/paper drawer and fix it with the removed screw.

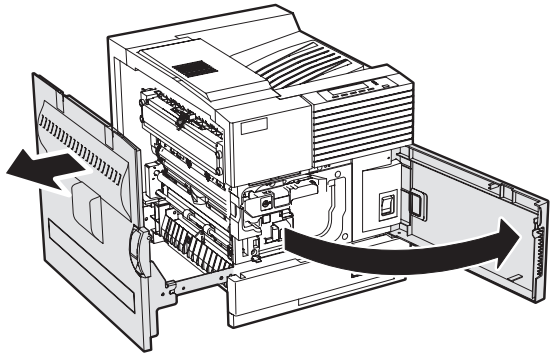



8) Connect the AC cord of the power supply unit to the main unit of the printer.
Connect the AC cord of the power supply unit to the outlet connector of the main unit of the printer at the location shown in the illustration.

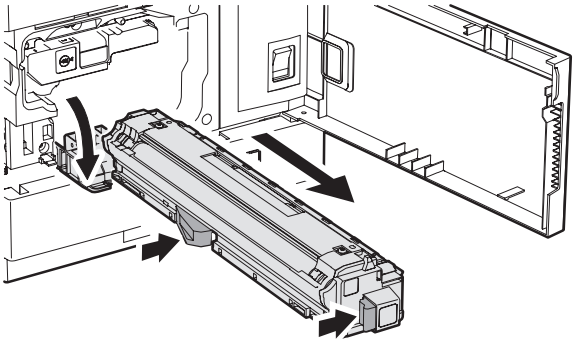


## C. Setting related to process

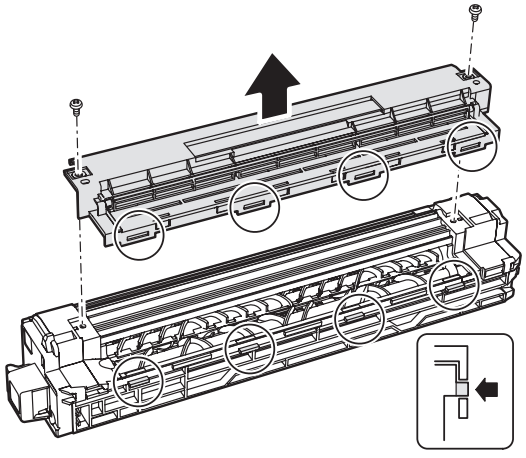
1) Open the left door and the front door.



2) Remove the developer cartridge from the machine.

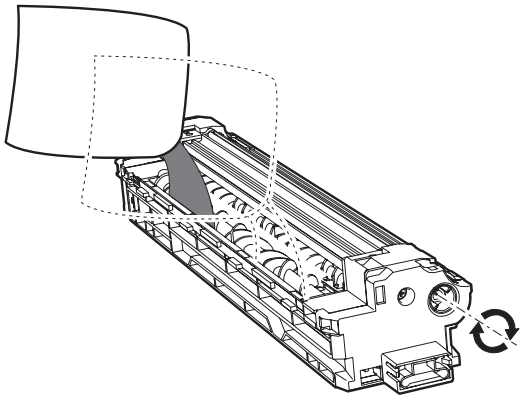


3) Remove the top cover of the developer cartridge.



4) While rotating the MG roller, supply developer into the developer cartridge evenly.B

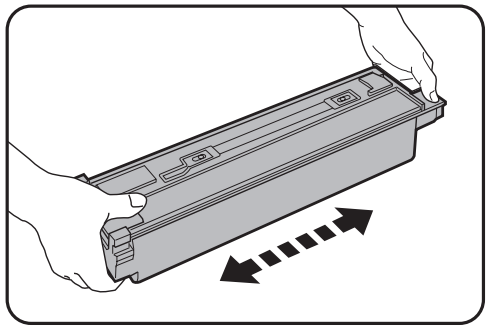
Note: Before opening the developer seal, shake it 4 or 5 times.



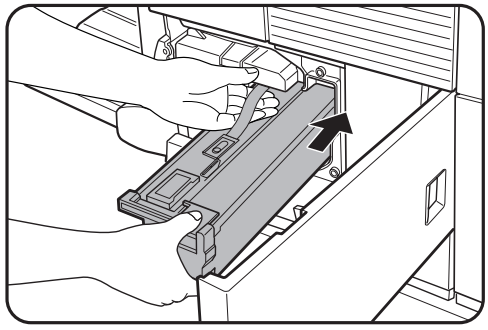
5) Attach the top cover to the developer cartridge and install the cartridge to the machine.

## D. Toner cartridge settings

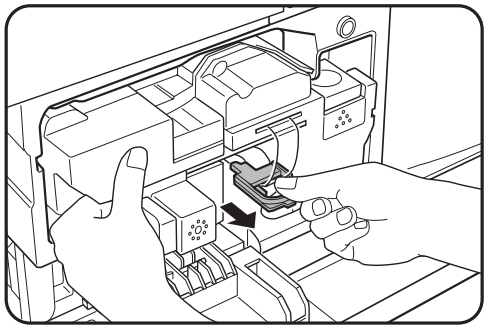
1) Remove a new toner cartridge from the package and shake it horizontally five or six times.



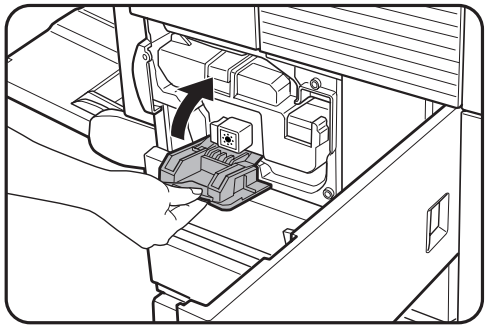
2) Insert a new toner cartridge.
Push the cartridge in until it locks securely into place.



3) Gently remove the sealing tape from the cartridge.

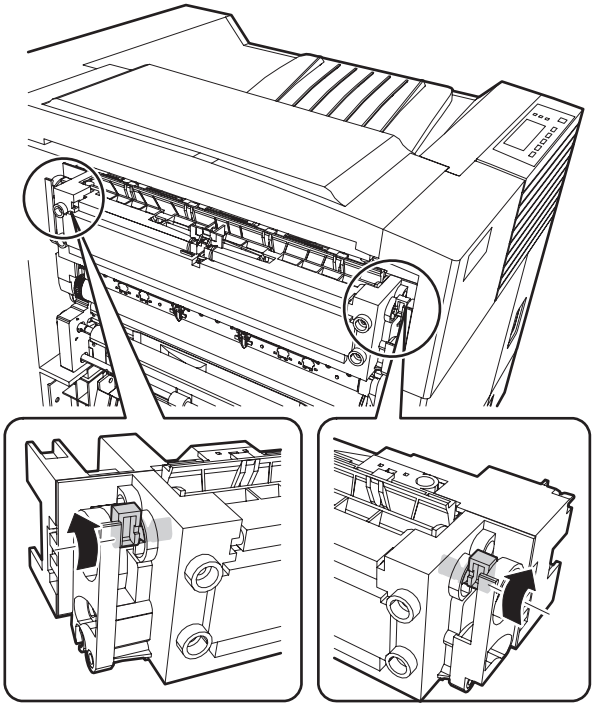


4) Return the cartridge lock lever.



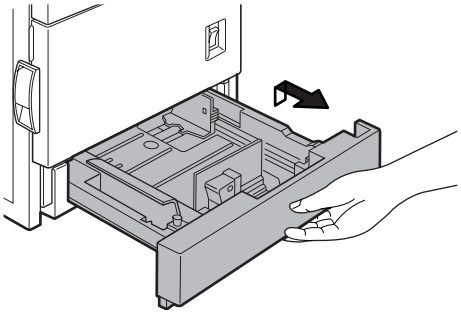
## E. Setting related to fusing

1) Put down the right and the left levers of the fusing unit in the arrow direction.

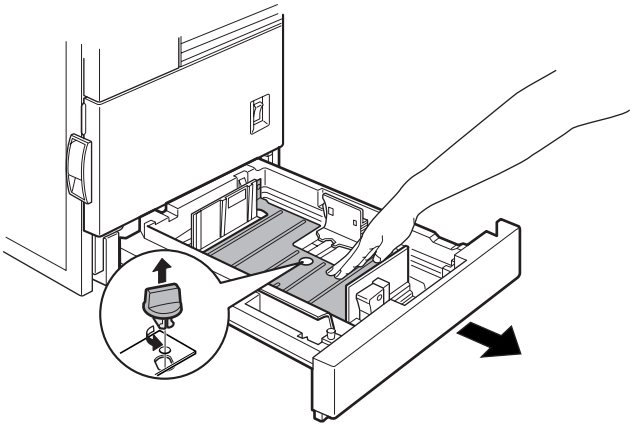


## F. Paper setting

1) Pull out the first stage paper feed tray.
Slowly pull out the tray until it stops.



2) While pressing the paper holding plate, remove the fixing pin.

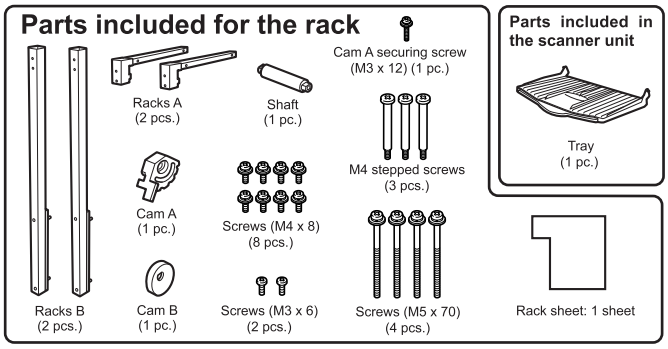


3) Put paper in the tray, and close the paper feed tray.

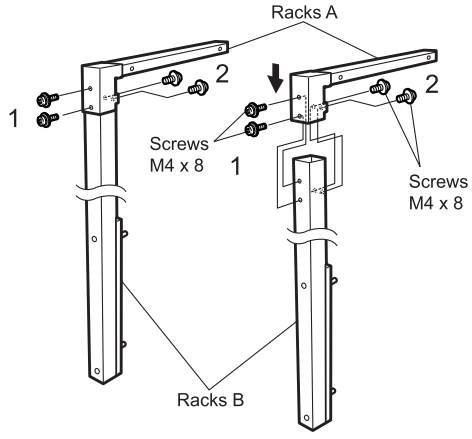
# 5. AR-EF1 / AR-RK1

**<Before installation>**

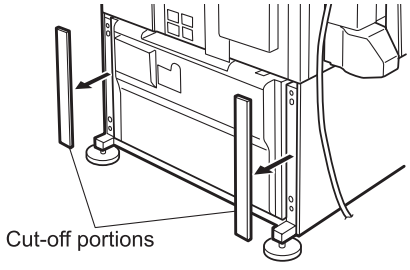
•For installation, an MFP control board (AR-M11) is needed.


Parts included for the rack
Racks A (2 pcs.)
Shaft (1 pc.)
Cam A securing screw (M3 x 12) (1 pc.)
M4 stepped screws (3 pcs.)
Cam A (1 pc.)
Screws (M4 x 8) (8 pcs.)
Racks B (2 pcs.)
Cam B (1 pc.)
Screws (M3 x 6) (2 pcs.)
Screws (M5 x 70) (4 pcs.)
Parts included in the scanner unit
Tray (1 pc.)
Rack sheet: 1 sheet

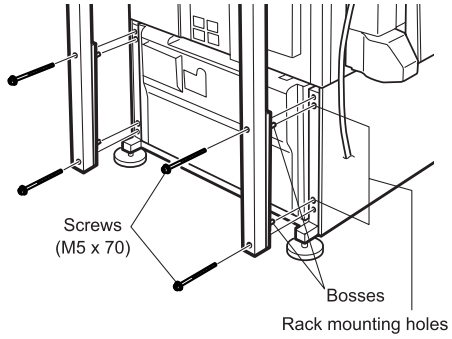
1) Assemble the rack.
Insert two racks A securely all the way into two racks B respectively as shown in the illustration and use four screws (M4 x 8) respectively to secure the racks in the order of <1> to <2> in the illustration.



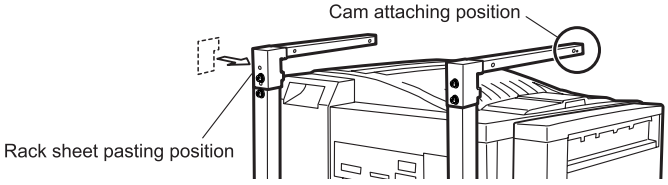

2) Cut the rear cabinet of the desk unit.
Cut the cut-off portions on both ends of the rear cabinet of the desk unit by hand and remove them.



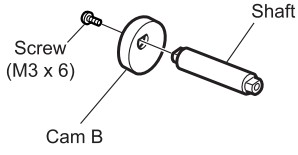
3) Mount the rack to the desk unit.
Insert the bosses of the rack into the two rack mounting holes from which the cut-off portions of the rear cabinet of the desk unit have been removed, and use two screws (M5 x 70) to secure each rack.



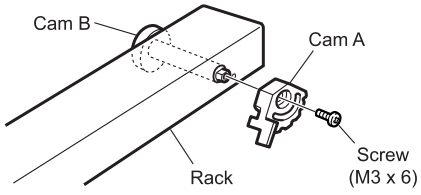

4) Attach the cam and paste the rack sheet.
Attach the cam to the position shown in the right illustration and paste the rack sheet as described in <4>.



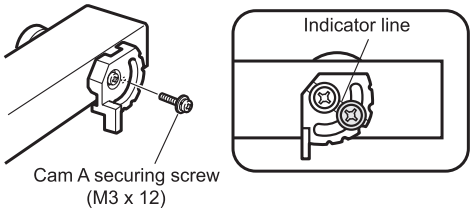

<1>Insert the shaft to cam B as shown in the illustration and secure it with a screw (M3 x 6).



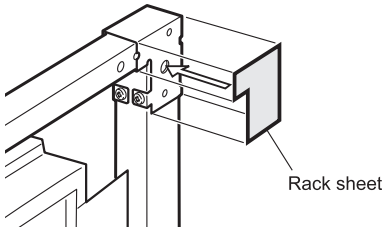

<2>Insert the shaft that has been attached to cam B into the hole of the rack as shown in the illustration, attach cam A to the shaft, and secure it with a screw (M3 x 6).



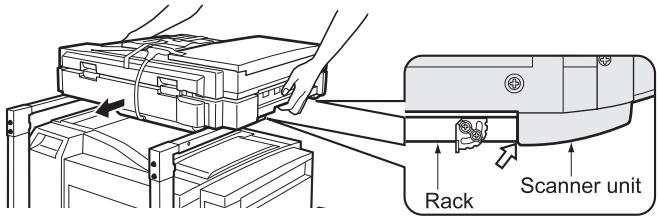

<3>Secure cam A with a cam A securing screw (M3 x 12).
At this time, adjust the position of the head of the cam A securing screw to the center of the indicator line of cam A and secure the cam.



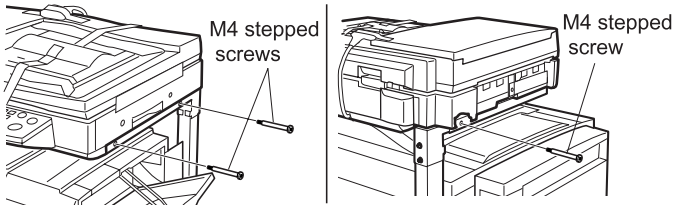

<4>Paste the rack sheet to the position shown in the illustration.



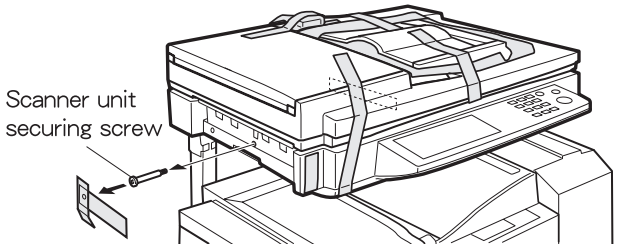

5) Put the scanner unit on the rack.
Hold the grips of the scanner unit, put the scanner unit on the rack from the front of the rack by positioning the unit to the rack as shown in the illustration, and gently slide the unit until it stops at the end of the rack.




6) Secure the scanner unit.
Secure the scanner unit that has been put on the rack to the rack with three M4 stepped screws.

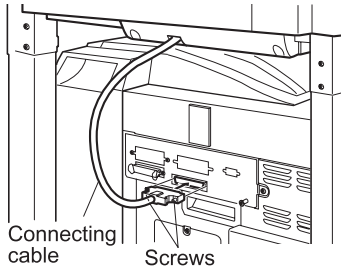



7) Remove the securing tape and securing screw for packing.
Remove all pieces of packing tape and the screw that secure the scanner module and remove the packing, the notice sheet.

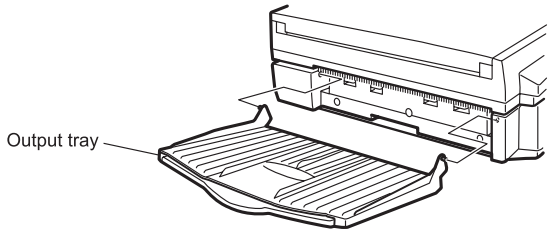



8) Connect the cable.
Connect the connector of the scanner module to the connector of the main unit of the printer and tighten the two screws on the connector to secure the connector.

Caution: To prevent damage to the pins inside the connector, when inserting the connector, align the guides of the connector exactly.




9) Attach the output tray.
Attach the output tray to the scanner unit as shown in the illustration.



If another peripheral device must be installed, carry out the following step at the end of the installation work.

## 6. Automatic developer adjustment

1) Attach the cabinets which were removed.

2) Close the left door.
   At that time, keep the front door open.

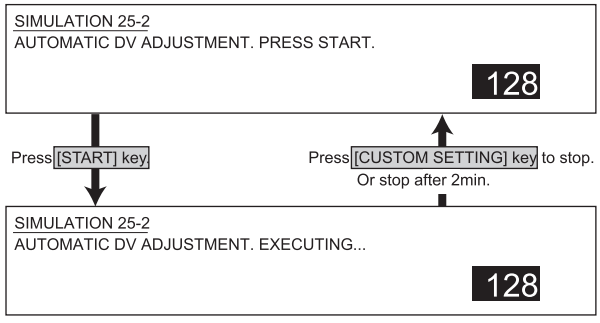
Note: The automatic developer adjustment must be performed by entering the simulation mode with the front door open. If the power is turned off with the front door closed, warm-up is performed to supply toner to the developing unit. As a result, the reference toner density cannot be obtained.

3) Insert the power plug into the power outlet.

4) Switch to the copy mode, and press
   [P] → [*] → [C] → [*] → [2] [5] → [START] → [2] → [START], and
   the machine will enter the simulation mode “AUTOMATIC DV AD”.

5) Close the front door.

**(LCD Display)**




6) Press the [START] key, and the automatic developer adjustment will be performed.
   During execution of the automatic developer adjustment, the data (LED) blinks and the LCD indicates the toner sensor value.

7) After about 2 min, the adjustment value is stored in the machine. Check that the mode was normally completed.
   Normal end: The data LED goes off.
   Abnormal end: The error LED lights up.
   Remove the cause of the error, and execute the automatic developer adjustment again.

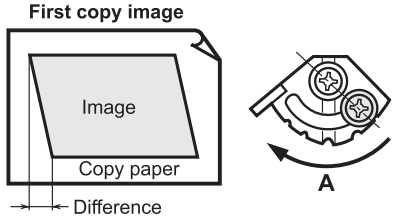
8) Turn off/on the power, and the machine returns to the normal mode and enters the warm-up mode.

## 7. Adjustment of distortion

Since adjustment was made at the shipment, any additional adjustment is not needed basically. If distortion occurs as shown in the illustration, however, perform the adjustment by following the procedure below.

1) Use a level meter to check that the scanner unit is installed on a horizontal surface.
   Make a copy. If distortion occurs as shown in Fig.1 or Fig. 2, loosen the cam A securing screw (M3 x 12) to perform the adjustment.

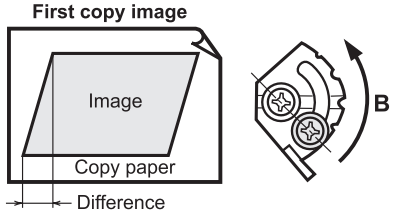
**[Fig. 1]**




**• In case of Fig. 1**

Move cam A in the direction of A by the difference of the image.
As a guide for the amount of movement, the image moves 0.5 mm by one division (one groove) of cam movement.
After the movement, tighten the cam A securing screw (M3 x 12) and make a copy again to check that the copy image is not distorted.

**[Fig. 2]**




**• In case of Fig. 2**

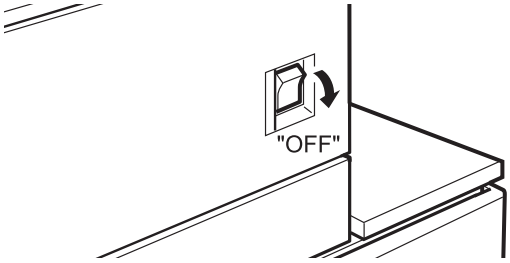
Move cam A in the direction of B by the difference of the image.
As a guide for the amount of movement, the image moves 0.5 mm by one division (one groove) of cam movement.
After the movement, tighten the cam A securing screw (M3 x 12) and make a copy again to check that the copy image is not distorted.

# 8. AR-M11

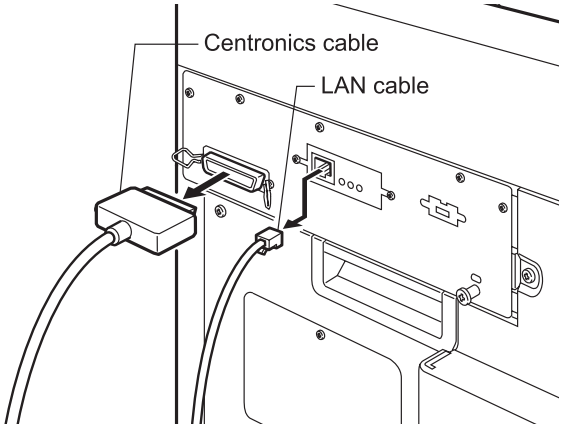
**<Before installation>**

•For installation of AR-M11, a scanner module is needed.
•Start installation after checking that the DATA and COMMUNICATION indicators on the operation panel are neither lit nor blinking.

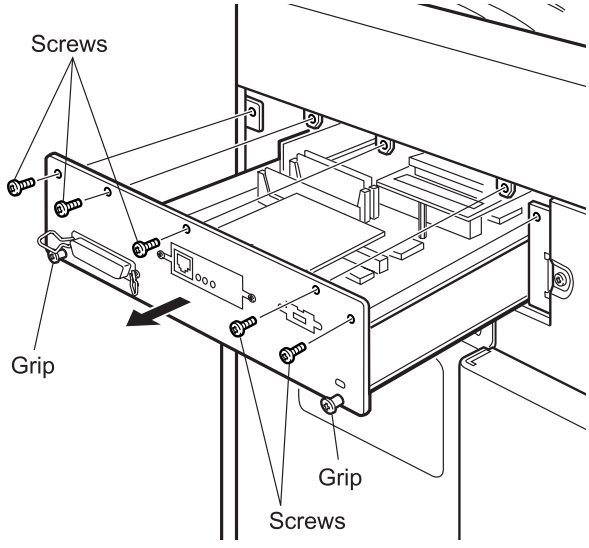
1) Turn off the main switch of the main unit of the printer.
Turn the main switch located on the front side of the main unit to the "OFF" position.
Then remove the power plug from the outlet.



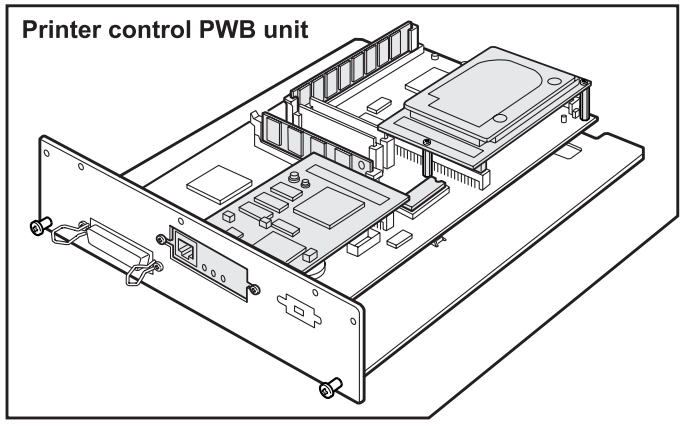

2) Remove the cables connected to the printer control PWB unit.
Remove all the cables connected to the printer control PWB unit from the computer.

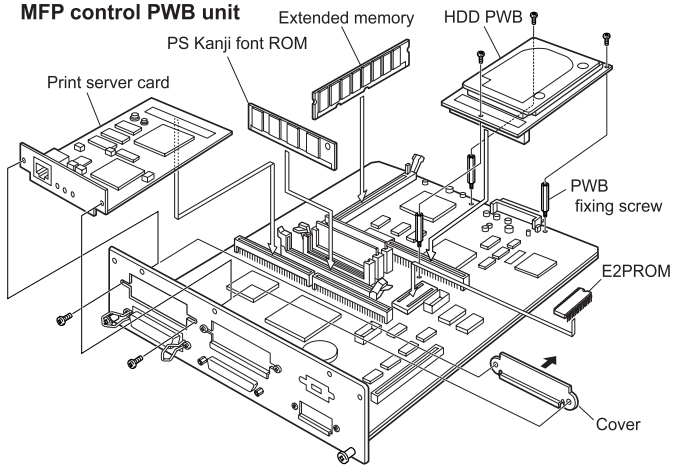



3) Remove the printer control PWB unit.
Remove the five screws that fix the printer control PWB unit to the main unit of the printer.
Then, hold the two grips and pull out the printer control PWB to remove it from the main unit.




4) Move the optional boards to the MFP control PWB.
Remove the print server card, the HDD PWB, the expansion memory, the PS Kanji font ROM, and the E2PROM from the removed printer control PWB unit and mount them to the positions of the MFP control PWB unit shown in the illustration.



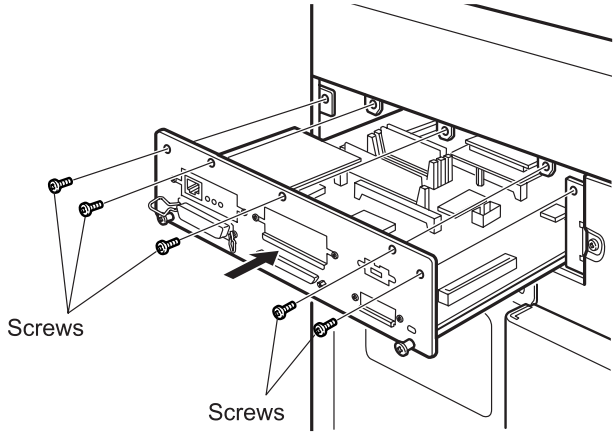

**•Installation of print server card**

<1>Remove the screws that fix the cover and remove the cover.
<2>Insert the connector of the print server card to the connector of the MFP control PWB unit.
<3>Fix the print server card using the removed screws.

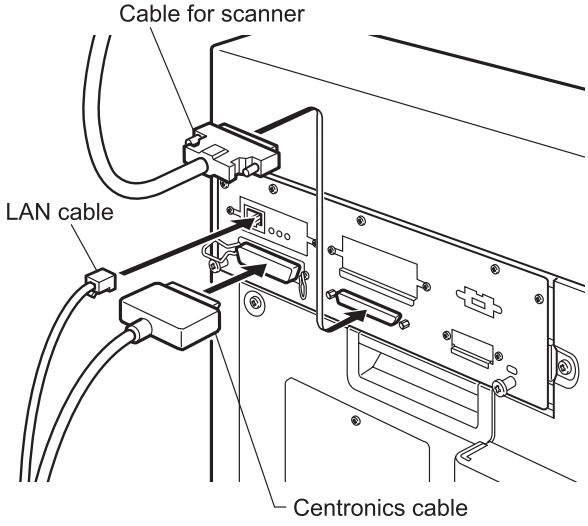
**•Installation of HDD expansion PWB**

<1>Remove the three screws shown in the illustration among the screws that fix the MFP control PWB unit.
<2>Mount the three PWB fixing screws to the positions from which three screws have been removed.
<3>Insert the HDD expansion PWB to the connector of the MFP control PWB.
<4>Fix the HDD expansion PWB to the PWB fixing screws using the three screws that have been removed.

5) Attach the MFP control PWB.
Attach the MFP control PWB unit to the main unit of the printer and fix it using five screws.

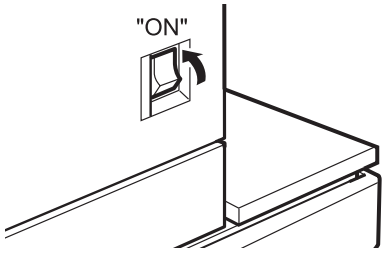



6) Connect the cables to the MFP control PWB.
Connect all the cables that have been removed in step 2 to the connectors of the MFP control PWB unit.




If another peripheral device must be installed, carry out the following step at the end of the installation work.

7) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.




8) Check the operation.
<1>Check to see if the indicators on the operation panel of the scanner module are lit and key operation is available.
<2>Place an original in the scanner module and check to see if copying can be performed normally.
<3>For setting change of the printer drivers on the computer, see the supplied operation manual.
Then, execute printing from the computer to check for proper printing.

# [7] DISASSEMBLY AND ASSEMBLY, MAINTENANCE

## 1. Self print of set values

Use of SIM 22-6 allows to print the set values and the jam history of the machine.
These values must be printed before execution of maintenance or disassembly procedures.

## 2. Maintenance System Table

### A. Scanner / DSPF

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)　○ Clean　▲ Replace　△ Adjust　☆ Lubricate　□ Move position

| Unit name | Part name | | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Optical section | Mirror/Lens/Reflector/Sensors | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Table glass/OC | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | White reference glass | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Rails | | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Drive belt/Drive wire/Pulley | | | × | × | × | × | × | × | × | × | |
| DSPF | Paper feed section | Take-up roller | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | | Separation pad | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | | Paper feed roller | ○ | ○ | ▲ | ○ | ▲ | ○ | ▲ | ○ | ▲ | Note 2 |
| | Transport section | PS roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Exposure section (Dust-proof glass) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Paper exit section | Paper feed roller SPF | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Other | Sensors | | | ○ | | ○ | | ○ | | ○ | For cleaning, blow air. |
| | Finish stamp section [Option] (Japan only) | Stamp solenoid | | | | | | | | | ▲ | |
| | | Stamp individual part | × | × | × | × | × | × | × | × | × | User replacement at 10K or 1 year. |

Note 2: Replacement reference: Same as above or 2 years.

## B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

| Unit name | Part name | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Drum peripheral | Drum | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Installed when shipping |
| | Cleaner blade | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Toner reception seal | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Side molt | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Transfer roller | × | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | Discharge plate | × | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | TR bearing (F/R) | | | × | | × | | × | | ▲ | |
| | Transfer roller collar | | | × | | × | | × | | ▲ | |
| | After-transfer star ring | | | × | | × | | × | | × | |
| | TR gear | × | × | × | × | ▲ | × | × | × | ▲ | |
| | Screen grid | (○)× | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Drum separation pawl UN | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Charger case (M/C) | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Charging plate (saw teeth) | (○)× | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| Developing section | Developer | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | Supplied when installing |
| | DV blade | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | DSD collar | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | DV side seal F | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | DV side seal R | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| | Toner cartridge | | | | | | | | | | Attached when installing./ EX Japan: 814g, user replacement for every 27K. |
| Fusing section | Upper heat roller | | ○ | ○ | ○ | ▲ | ○ | ○ | ○ | ▲ | |
| | Lower heat roller | | ○ | ○ | ○ | ▲ | ○ | ○ | ○ | ▲ | |
| | Upper separation pawl | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Lower separation pawl | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Thermistor | | ○ | × | ○ | × | ○ | × | ○ | × | Clean and remove paper dust. |
| | Upper heat roller gear | | × | × | × | ▲ | × | × | × | ▲ | |
| | Paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Gears | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Cleaning roller | | × | × | × | ▲ | × | × | × | ▲ | |
| | CL roller collar | | | | | ▲ | | | | ▲ | |
| Filters | Ozone filter | | | ▲ | | ▲ | | ▲ | | ▲ | |
| Paper feed section | Paper feed roller | ○ | ○ | × | ○ | × | ○ | × | ○ | × | Note 1 |
| | Torque limiter | × | | × | | × | | × | | × | Note 1 |
| Transport section Paper exit reverse section | PS follower roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Transport rollers | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Paper dust remover | | × | ▲ | × | ▲ | × | ▲ | × | ▲ | |
| Drive section | Specified position | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Belts | | | | | | | × | | | |
| Image quality | | × | × | × | × | × | × | × | × | × | |
| Other | Sensors | | | × | | × | | × | | × | |

Note 1:Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Torque limiter section: 80K or 2 years

## C. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

| Option name | Part name | | When calling | 50K | 100K | 150K | 200K | 250K | 300K | 350K | 400K | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADU + Manual feed | Paper feed separation section | Paper feed rollers | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Separation pad | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Torque limiter | (○) × | | × | | × | | × | | × | Note 3 |
| | Transport section | Transport rollers | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| Desk (Multi stage LCC) Multi purpose | Paper feed separation section | Paper feed rollers | (○) × | ○ | × | ○ | × | ○ | × | ○ | × | Note 3 |
| | | Torque limiter | (○) × | | × | | × | | × | | × | Note 3 |
| | Transport section | Transport roller | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | | Transport paper guides | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| Finisher | Transport section | Transport rollers | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | De-curler roller | (○) × | × | ○ | × | ○ | × | ○ | × | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| | Staple un | | | | | | | | | | | Replace UN at 100K staple. |
| | Staple cartridge | | | | | | | | | | | User replacement for every 3000pcs. |
| Mail-bin stacker | Transport section | Transport roller | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| Saddle finisher | Transport section | Transport roller | ○ | | ○ | | ○ | | ○ | | ○ | |
| | | Transport paper guides | ○ | | ○ | | ○ | | ○ | | ○ | |
| | Drive section | Gears | ☆ | | ☆ | | ☆ | | ☆ | | ☆ | (Specified position) |
| | | Belts | | | | | | | × | | | |
| | Other | Sensors | × | | × | | × | | × | | × | |
| | | Discharge brush | × | | × | | × | | × | | × | |
| | Staple UN | | | | | | | | | | | Replace UN at 100K staple (including the staple UN and the holder section). |
| | Staple cartridge | | | | | | | | | | | User replacement for every 5000 pcs. |

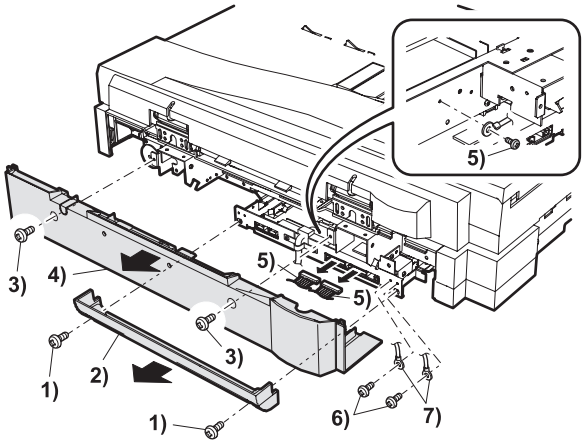
Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

# 3. Disassembly and assembly

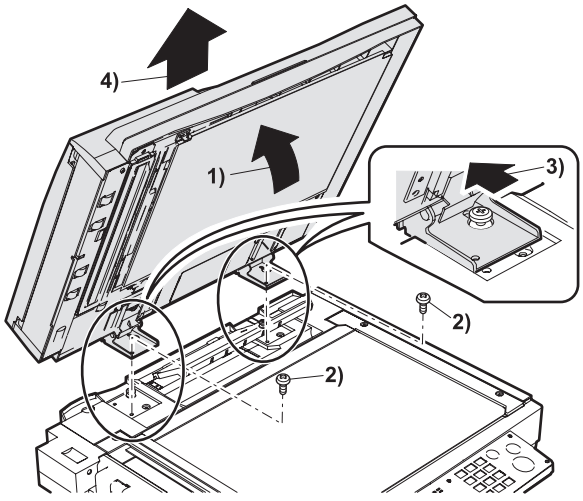
## A. Scanner unit

### (1) (D) SPF unit removal

1) Remove the rear cabinet of the scanner section.
2) Disconnect the connector.
3) Disconnect the grounding wire.



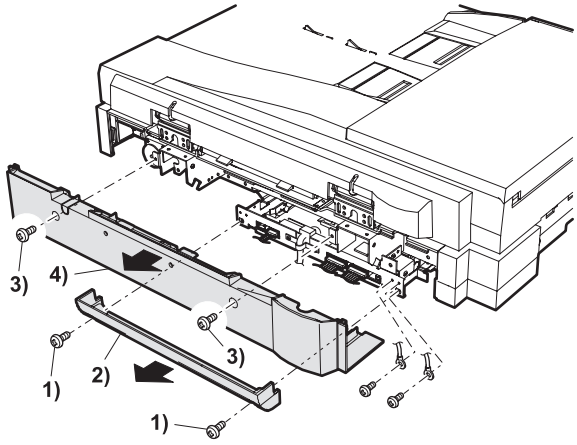

3) (S) Slide the SPF unit to the bottom, then remove it.




### (2) Scanner section

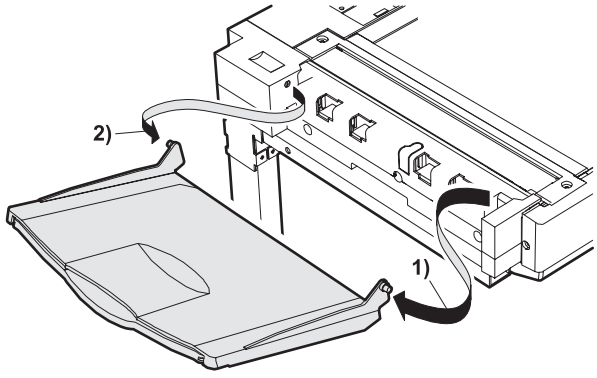
#### a. Rear cabinet, rear lower cabinet

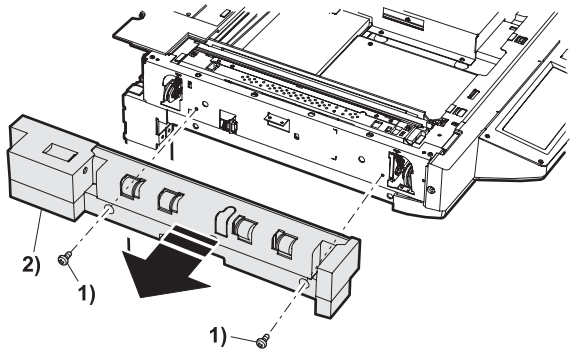
1) Remove the scanner rear cabinet and the rear lower cabinet.




#### b. Left cabinet

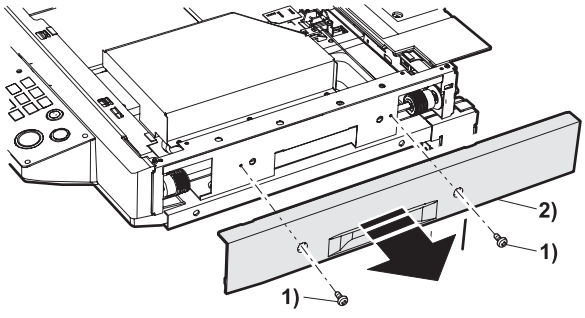
1) Remove the original exit tray, and remove the scanner left cabinet.



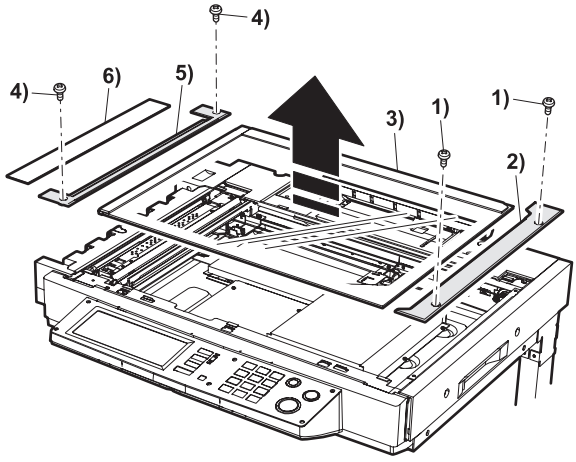

#### c. Right cabinet

1) Remove the scanner right cabinet.



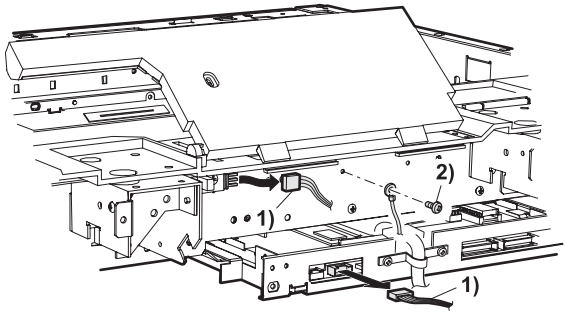
**d. Table glass, SPF glass**

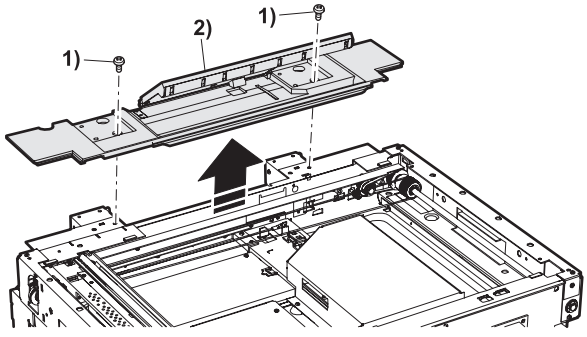
1) Remove the table glass holder and the SPF glass holder, and remove the table glass and the SPF glass.




**e. Scanner upper cabinet unit**

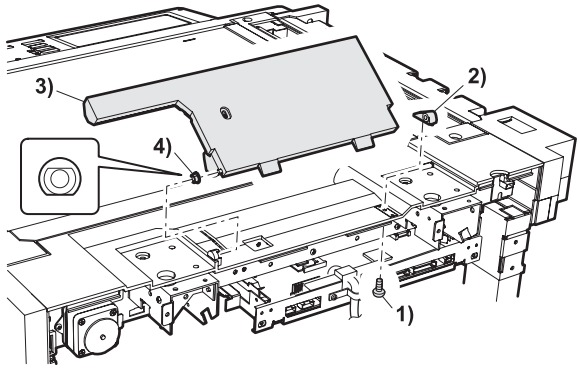
1) Remove the SPF unit
2) Remove the table glass.
3) Remove the rear cabinet.
4) Remove the scanner upper cabinet unit.



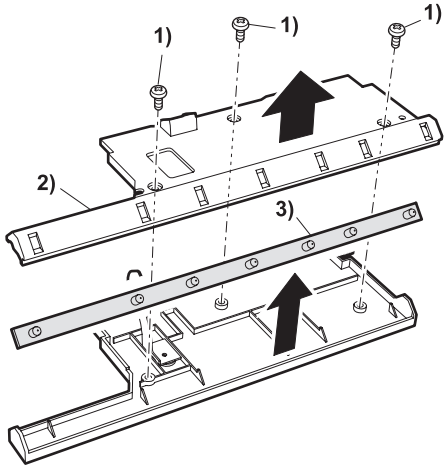




**f. Original detection PWB (Light emitting side)**

1) Remove the rear cabinet.
2) Remove the original detection unit (Light emitting side).

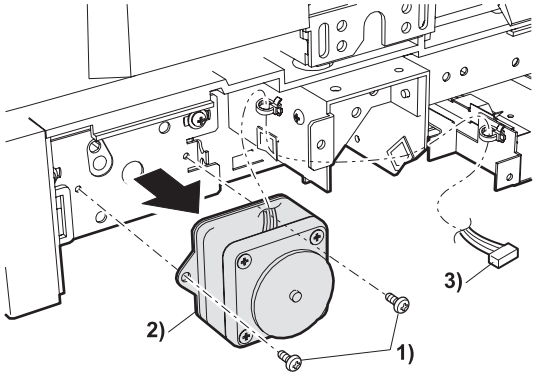



3) Remove the original detection PWB (Light emitting side).



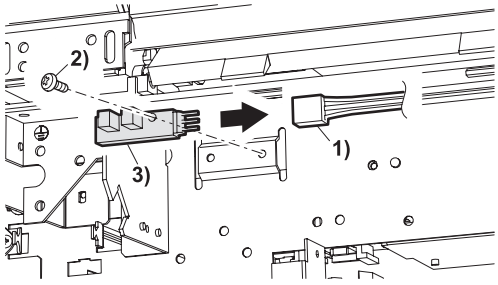

**g. Scan motor removal**

1) Remove the scanner rear cabinet and the rear lower cabinet.
2) Pull out the harness from the scanner control PWB.
3) Remove the scan motor.



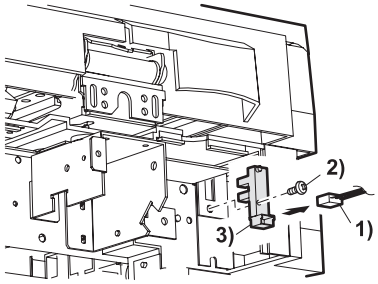
**h. OC open sensor**

1) Remove the rear cabinet.
2) Remove the OC open sensor.



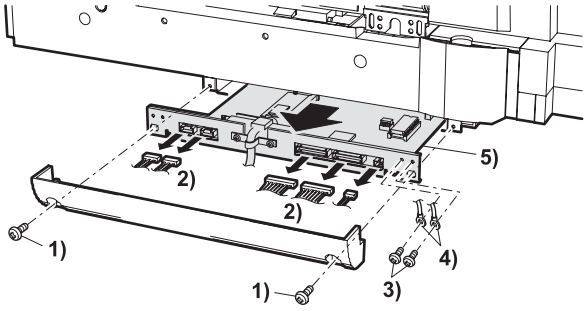

**i. Mirror home position sensor**

1) Remove the rear cabinet.
2) Remove the mirror home position sensor.




**j. Scanner control PWB**

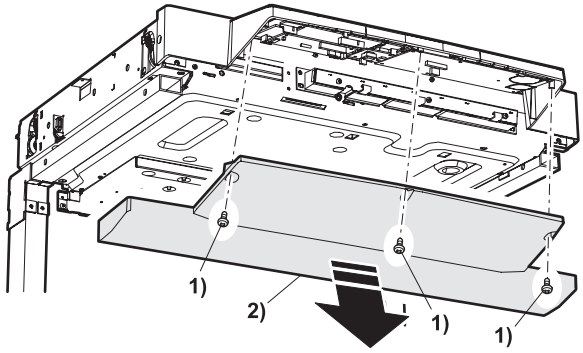
1) Remove the scanner rear lower cabinet.
2) Disconnect the connector and earth band, and pull out the scanner control PWB.



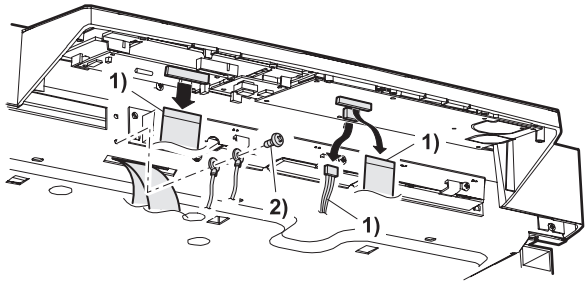

* When the scanner control PWB is replaced, the EEPROM must be replaced.

**k. Operation panel unit**

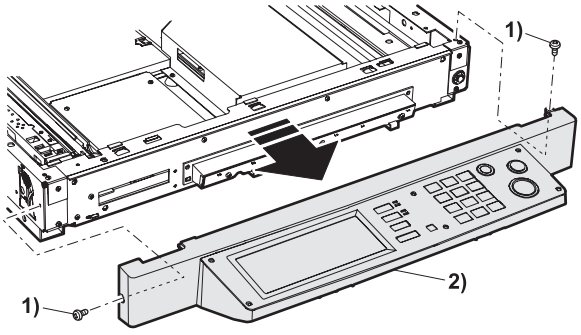
1) Remove the operation panel lower cabinet.




2) Remove the harnesses.

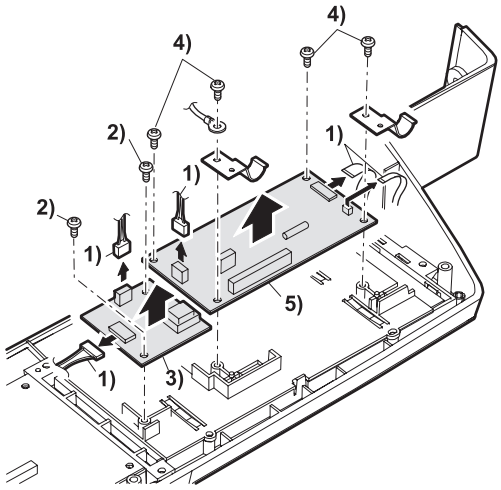



3) Remove the scanner right cabinet.
4) Remove the operation panel unit.

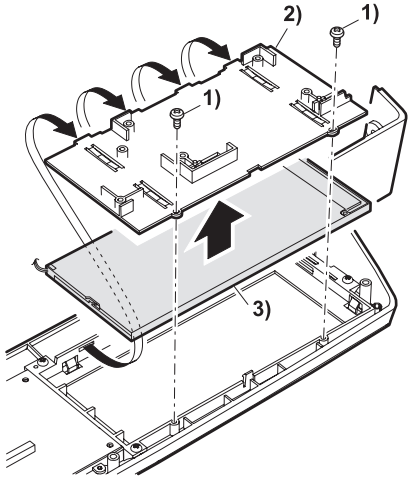


**l. Inverter PWB/LVDS PWB/LCD panel**

1) Remove the operation panel unit.
2) Remove the harness, and remove the inverter PWB and the LVDS PWB.

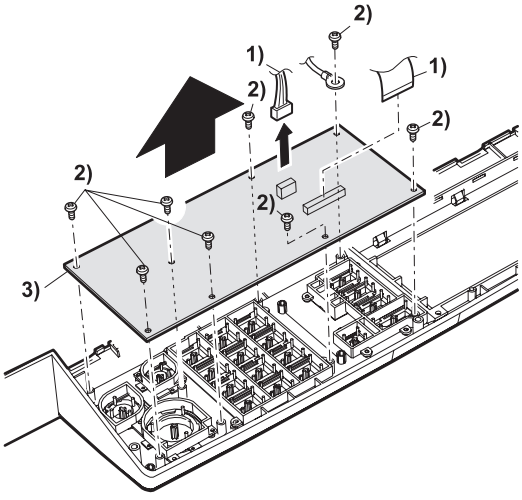



3) Remove the LCD rear cover, and remove the LCD.



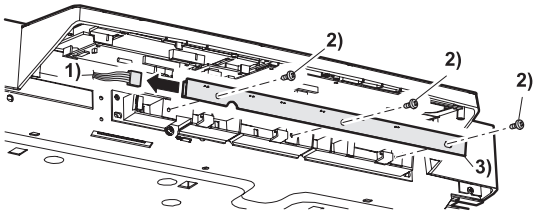

**m. Operation control PWB**

1) Remove the operation panel unit.
2) Remove the operation control PWB.



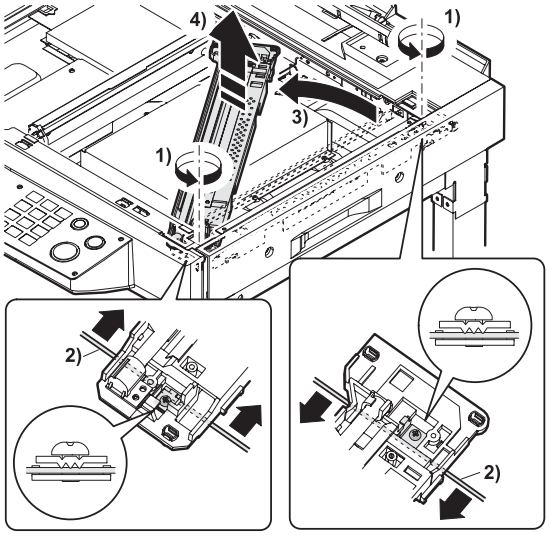

**n. Original detection PWB (Light receiving side)**

1) Remove the operation panel lower cabinet.
2) Remove the original detection PWB (light receiving side).



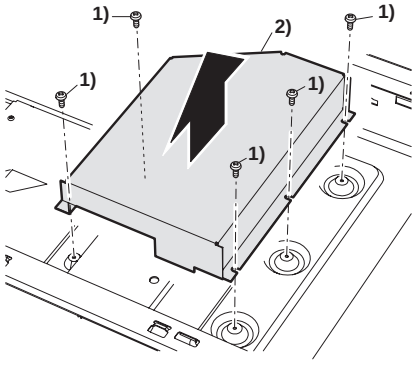

**o. Scan lamp**

1) Remove the table glass.
2) Remove the scan lamp unit.



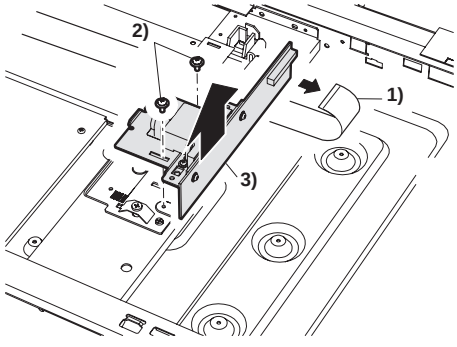

**p. CCD/lens unit**

1) Remove the table glass.
2) Remove the dark-box cover.



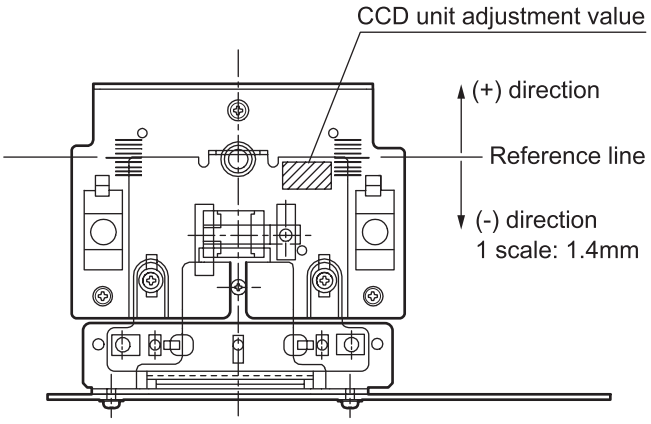

3) Remove the CCD/lens unit.

Note: The CCD/lens unit is factory-adjusted before shipping.
Since these adjustments cannot be performed in the market.
Never touch the screws other than screw 2) of the CCD/lens unit.



**Note for CCD/lens unit installation**

<1>Adjust the CCD unit adjustment value listed in the table below with the scribed line on the lens base.




| | CCD adjustment value |
|---|---|
| +4 scales | 5.0~ |
| +3 scales | 3.6~4.9 |
| +2 scales | 2.2~3.5 |
| +1 scale | 0.8~2.1 |
| Reference | -0.6~0.7 |
| -1 scale | -2.0~ -0.7 |
| -2 scales | -3.4~ -2.1 |
| -3 scales | -4.8~ -3.5 |
| -4 scales | ~ -4.9 |

<2>Make a sample copy at the above position, and measure the magnification ratio.

<3>Change the installing position in the horizontal direction to adjust the magnification ratio.

•When the copy image is longer than the original, shift to the positive (+) direction.

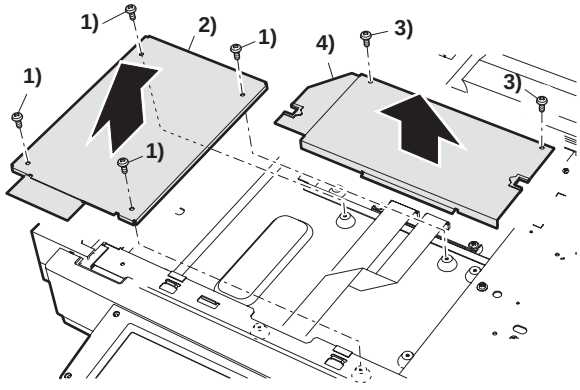
•When the copy image is shorter than the original, shift to the negative (-) direction.

* 1 scale of the scribed line corresponds to 0.3% of magnification ratio.

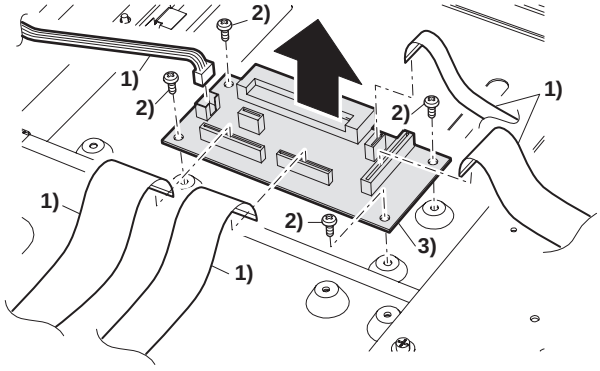
* If this adjustment is not satisfactory, make a fine adjustment with SIM 48-1.
(Refer to the adjustment described below.)

**q. Scanner interface PWB**

1) Remove the table glass.
2) Remove the PWB cover and the harness cover.



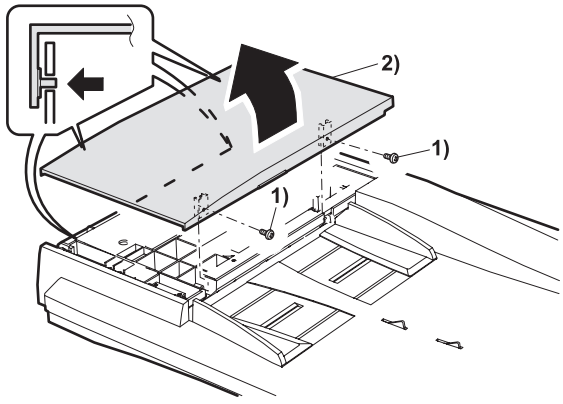

3) Remove the scanner interface PWB.



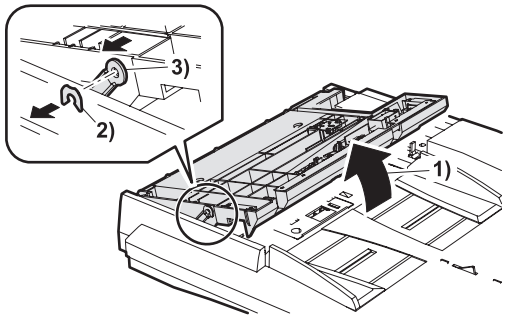

**(3) (D) SPF unit**

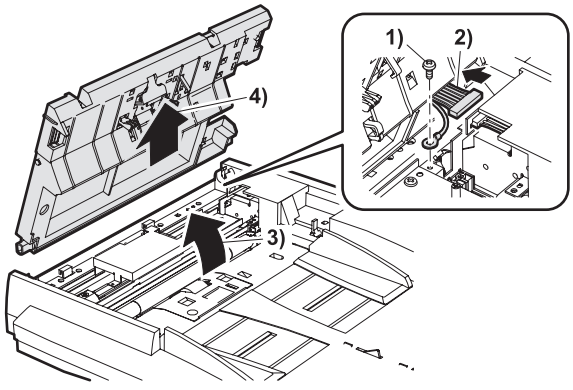
**a. Upper transport unit**

1) Remove the upper transport unit cover.



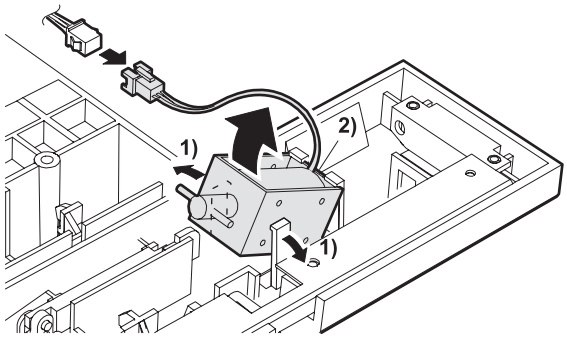

2) Remove the upper transport unit.



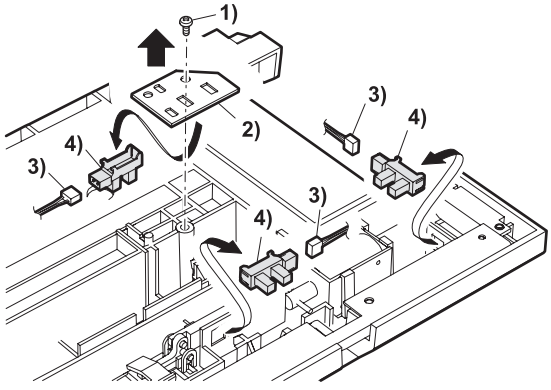
**b. Stopper solenoid**

1) Remove the upper transport unit cover.
2) Remove the stopper solenoid.



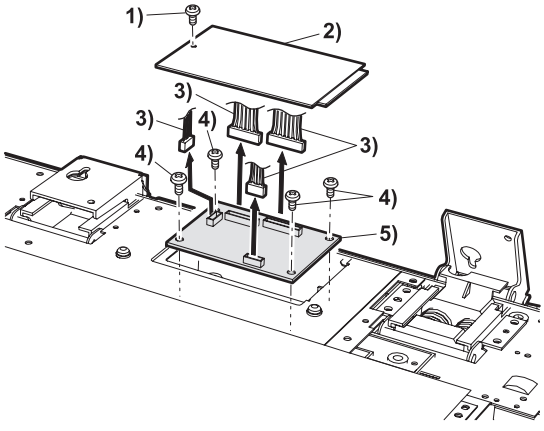

**c. Sensors**

1) Remove the upper transport unit cover.
2) Remove the sensors.



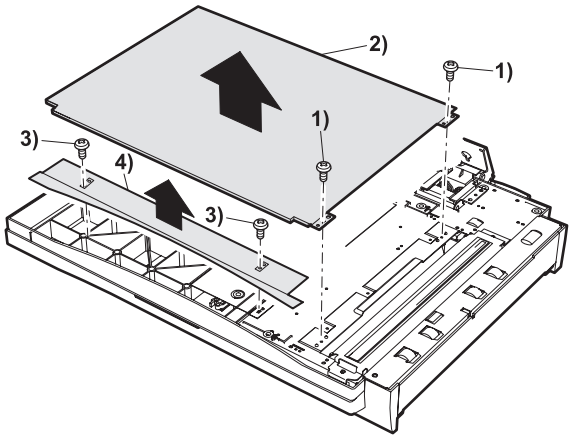

**d. (D) SPF control PWB**

1) Remove the SPF PWB, and remove the (D) SPF control PWB.

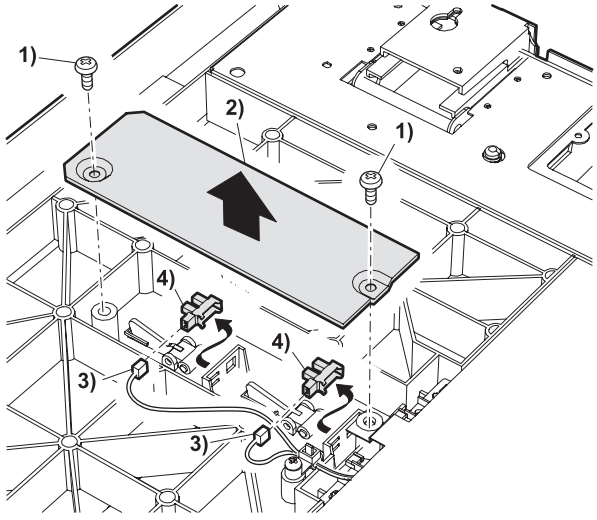



**e. Original length sensor**

1) Remove the OC cover.

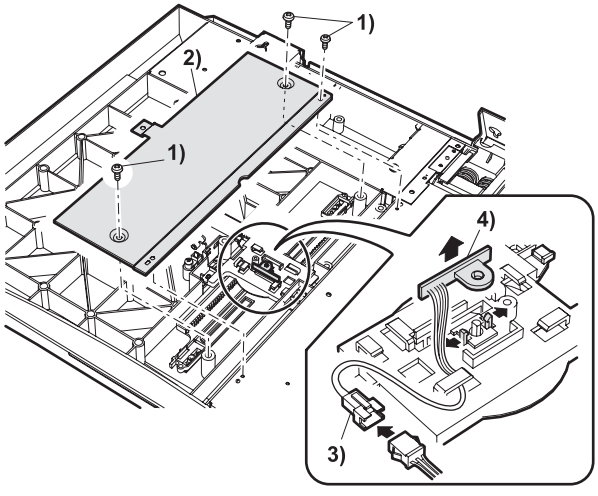



2)Remove the original length sensor cover, and remove the sensor.




**f. Original width detection volume**

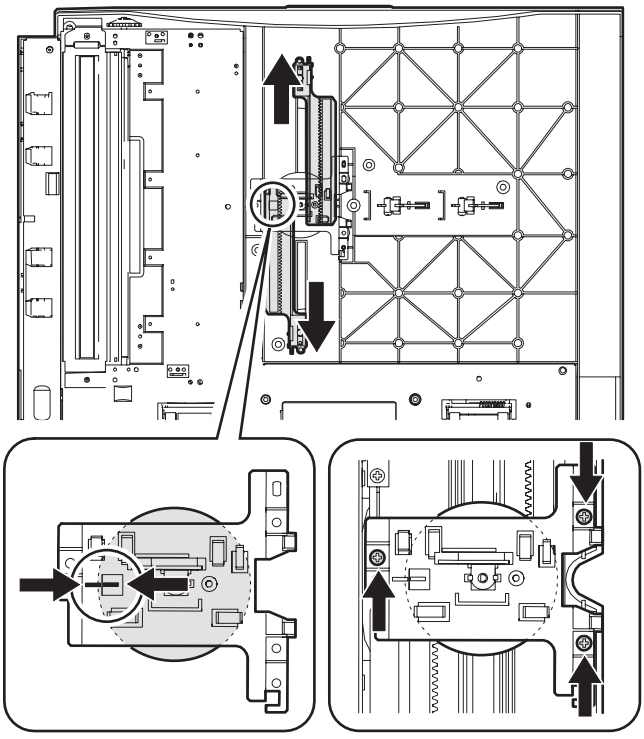
1) Remove the OC cover.
2) Remove the original length sensor cover.
3) Remove the volume cover and remove the volume.



**Original width detection volume installation**

<1>Extend the original guide to the maximum position.

<2>Adjust so that the mark on the width detection pinion gear is fitted with the mark on the volume mounting plate.

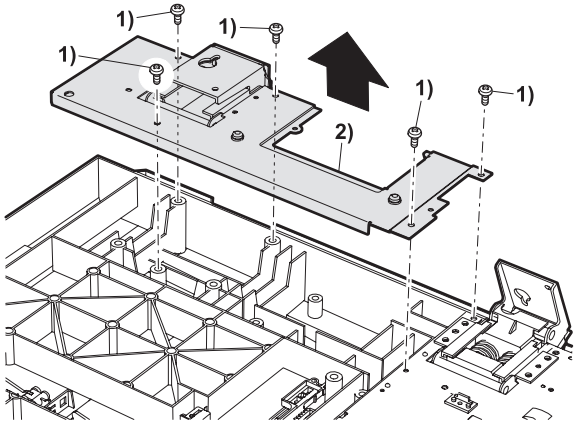


<3>Fix the mounting plate with the screw.

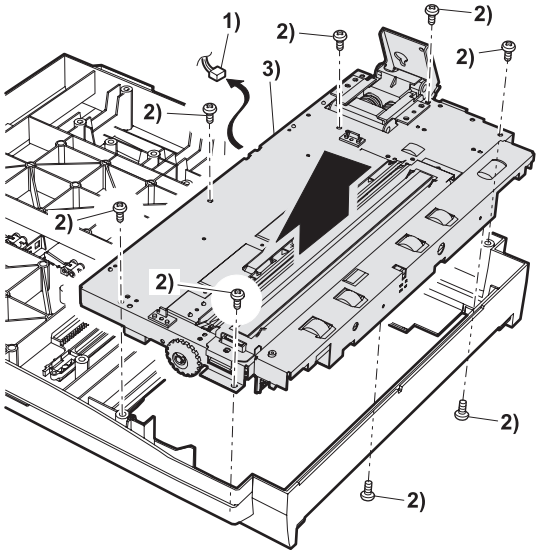
* When the rotational volume sensor is replaced, the sensor value must be adjusted to the paper size (mark on the tray). (Refer to the SIM 53-6 or 53-7.)

**g. Original paper feed unit**

1) Remove the OC cover.
2) Remove the SPF lower cover.

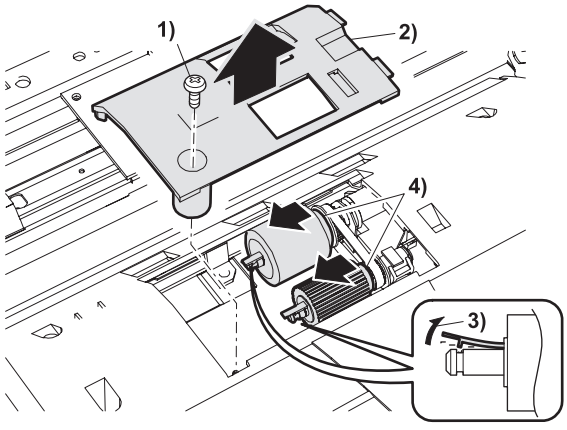



3) Remove the original paper feed unit.



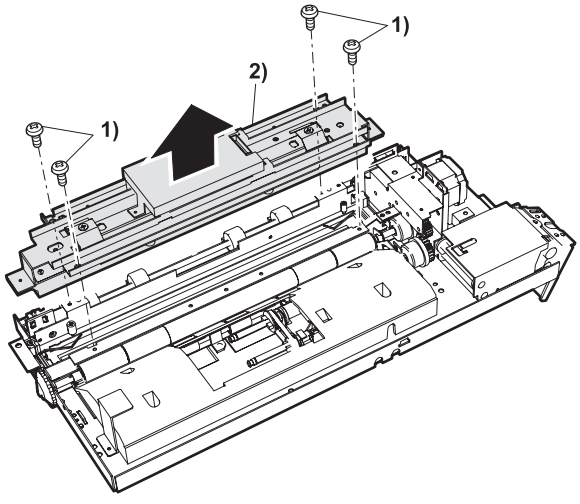

**h. Take-up roller, paper feed roller**

1) Remove the upper transport unit cover.
2) Remove the paper feed roller cover.
3) Remove the hook of each roller, and remove each roller.



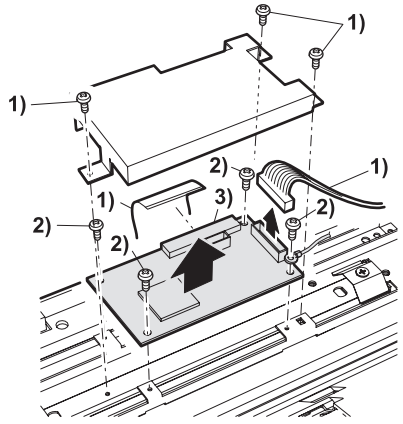

**i. CIS unit**

1) Remove the upper transport unit cover.
2) Remove the CIS unit.



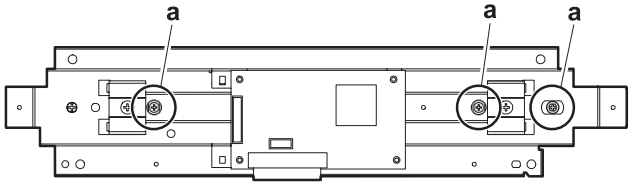

* When the CIS unit is replaced, the CIS shading adjustment must be performed. (Refer to the descriptions of ADJUSTMENTS.)

3) Remove the cover, and remove the CIS control PWB.



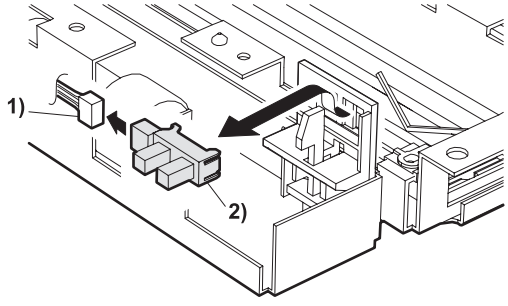

* For easy installation of the cover, slide the earth line to the connector side when attaching.

Note: The CIS unit is factory-adjusted before shipping.
Since these adjustments cannot be performed in the market, never touch the following screws of the CIS unit.



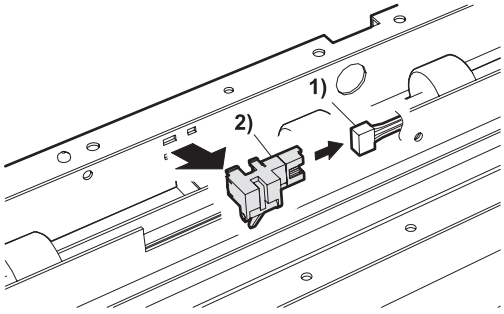

**j. Open sensor**

1) Remove the open sensor.



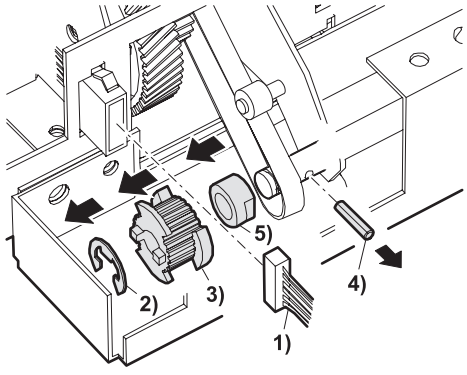

**k. Paper exit sensor**

1) Remove the paper exit sensor.

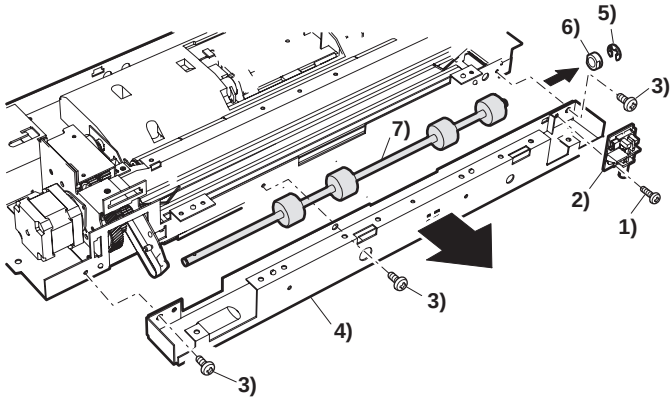



**l. Paper exit roller**

1) Remove the original paper feed unit.
2) Remove the paper exit roller gear.

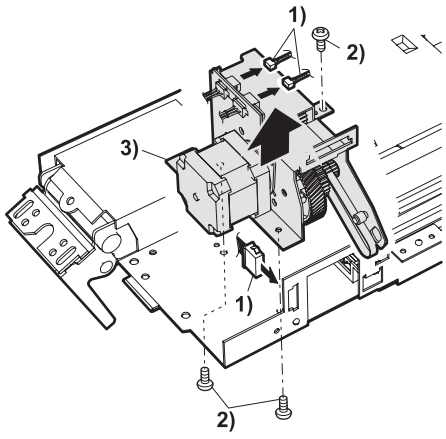



3) Remove the paper exit frame, and remove the paper exit roller.

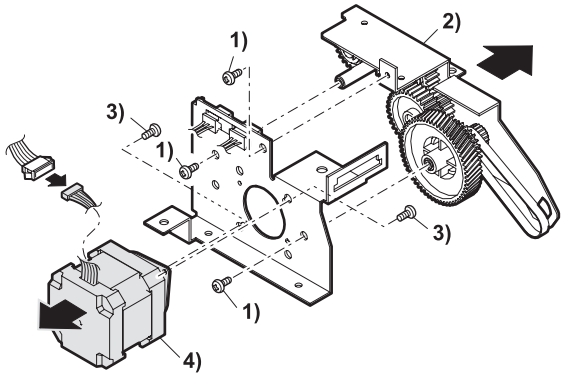


**m. SPF motor**

1) Remove the original paper feed unit.
2) Remove the SPF drive unit.

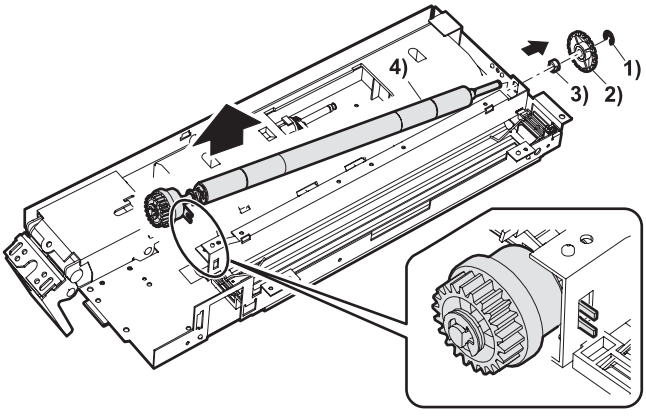



3) Remove the SPF motor.

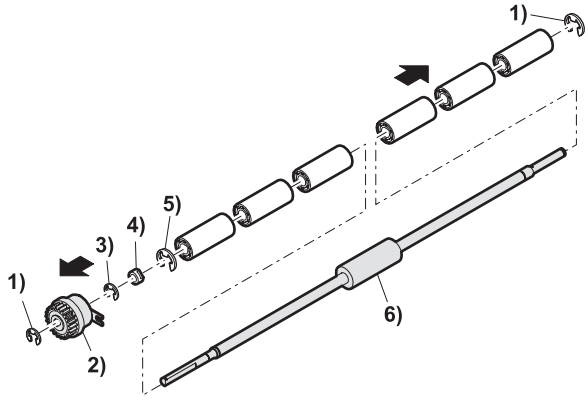



**n. SPF resist roller, SPF resist roller clutch**

1) Remove the SPF resist roller unit.

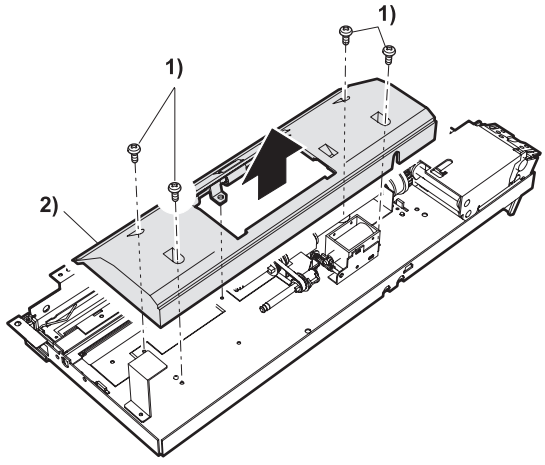



2) Remove the SPF resist roller and the SPF resist roller clutch.

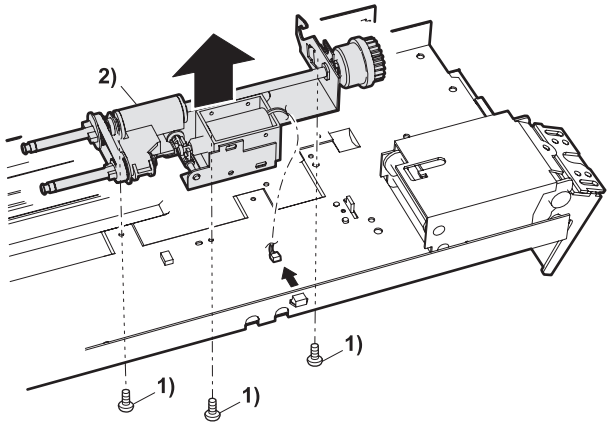



**o. SPF paper feed unit, original paper feed solenoid, SPF original paper feed clutch**

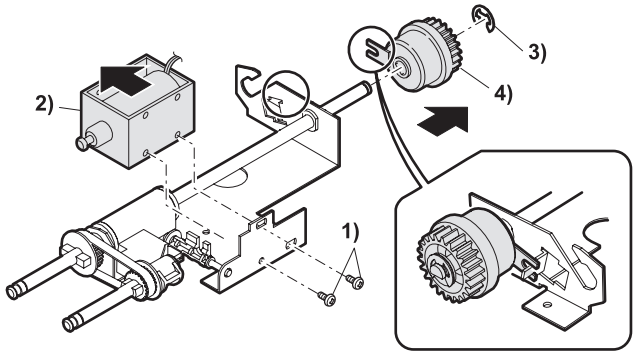
1) Remove the SPF paper feed unit.
2) Remove the SPF paper guide.




3) Remove the SPF pickup unit.




4) Remove the original paper feed solenoid and the SPF original paper feed clutch.

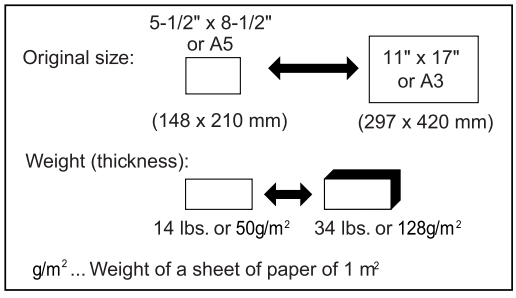


# [8] MACHINE OPERATION

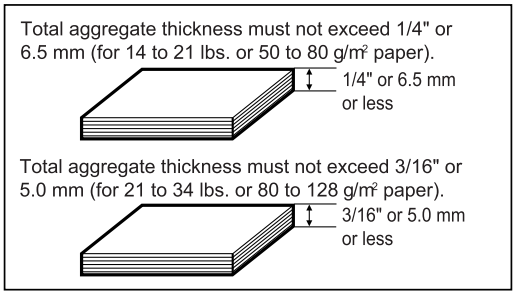
## 1. Acceptable originals

A stack of up to 50 original sheets of the same size paper can be set in the document feeder tray provided the stack
height is within the limit shown below.
A stack of up to 30 mixed size originals can be set if the width of the originals is the same and the stack height is within
the limit shown below. In this case, however, stapling and duplex will not function and some special functions may not
give the expected result.

### A. Size and weight of acceptable originals




### B. Total amount of originals that can be set in the document feeder tray

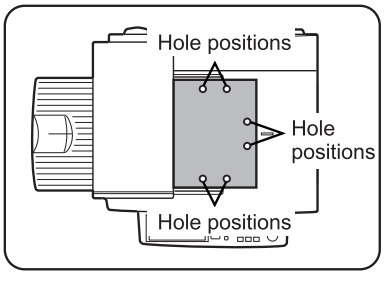

Total aggregate thickness must not exceed 1/4" or 6.5 mm (for 14 to 21 lbs. or 50 to 80 g/m² paper).
1/4" or 6.5 mm or less
Total aggregate thickness must not exceed 3/16" or 5.0 mm (for 21 to 34 lbs. or 80 to 128 g/m² paper).
3/16" or 5.0 mm or less

**<Notes on use of the automatic document feeder>**

- Use originals within the specified size and weight ranges. Use of originals out of the specified range may cause an original misfeed.
- Before loading originals into the document feeder tray, be sure to remove any staples or paper clips.
- If originals have damp spots from correction fluid, ink or glue from pasteups, be sure they are dried before they are fed. If not, the interior of the document feeder or the document glass may be soiled.
- To prevent incorrect original size detection, original misfeeds or smudges on copies, use the following as a guide for feeding originals.

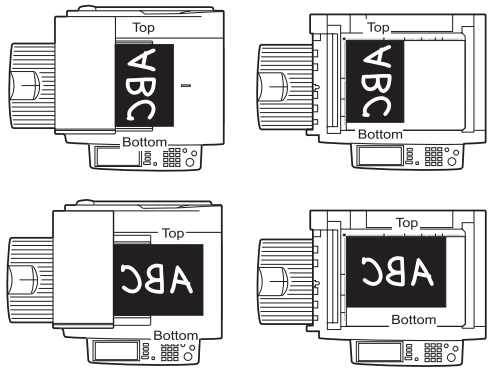
  Transparency film, tracing paper, carbon paper, thermal paper or originals printed with thermal transfer ink ribbon should not be fed through the document feeder. Originals to be fed through the feeder should not be damaged, crumpled or folded or have loosely pasted paper on them or cutouts in them. Originals with multiple punched holes other than two-hole or three-hole punched paper may not feed correctly.

- When using originals with two or three holes, place them so that the punched edge is at a position other than the feed slot.




## 2. Standard original setting orientation

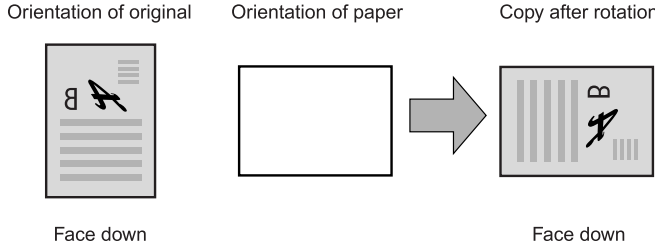
Descriptions of functions that follow in this manual assume that originals are oriented as shown.
Place originals in the document feeder tray or on the document glass so that the top of the original is positioned to the rear side of the machine.
If not, staples will be incorrectly positioned and some special features may not give the expected result.




## 3. Automatic copy image rotation - rotation copying

If the orientation of the originals and copy paper are different, the original image will be automatically rotated 90" and copied. (When an image is rotated, a message will be displayed.) When enlargement of originals larger than 8-1/2" x 11" or A4 is selected, rotation cannot be done.

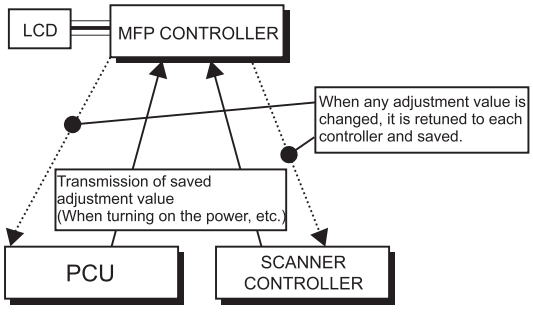
**[Example]**




## 4. Adjustment values

### A. Processing adjustment values

Each controller has its EEPROM. The adjustment values are collected to the MFP controller.
If any adjustment value is changed, the changed value is returned to the controller and saved.


LCD
MFP CONTROLLER
When any adjustment value is changed, it is retuned to each controller and saved.
Transmission of saved adjustment value (When turning on the power, etc.)
PCU
SCANNER CONTROLLER

## B. Adjustment values

### (1) Adjustment values saved in PCU

| Counters | Adjustment values | Others |
|---|---|---|
| Drum rotating time counter (accumulated time) | Developing bias voltage value | Serial number |
| Developing unit rotating time counter | Cleaning mode developing bias voltage value | Trouble history |
| Toner supply time (Section IC chip) | Main high voltage adjustment | Tray 1 size |
| Drum rotating time (Section IC chip) | Transfer charger voltage value | LCC tray size |
| Total counter | Transfer belt cleaning voltage value | Manual feed destination information |
| Maintenance counter | Toner concentration reference value | Tray 2 destination information |
| Developing counter | Concentration correction start set time (Developing unit) | Desk 1 destination information |
| Drum counter | Concentration correction rotating time (Developing unit) | Desk 2 destination information |
| Toner cartridge counter | Concentration correction quantity (Developing unit) | Machine tray remaining paper quantity data |
| Effective paper counter | Correction execution direction, upper/lower limits (Developing unit) | Multi-purpose remaining paper quantity data |
| Tray 1 paper feed counter | Toner concentration temperature correction (low temperature side) correction quantity | Option tray 1 remaining paper quantity data |
| Multi-purpose paper feed counter | Toner concentration temperature correction (low temperature side) set temperature | Option tray 2 remaining paper quantity data |
| Desk 1/LCC 1 paper feed counter | Toner concentration temperature correction (low temperature side) cancel temperature | Final toner concentration sensor output value |
| Desk 2/LCC 2 paper feed counter | Toner concentration temperature correction (high temperature side) correction quantity | Toner cartridge IC chip destination |
| Manual paper feed counter | Toner concentration temperature correction (high temperature side) judgment temperature | Counter mode setup |
| ADU paper feed counter | Toner concentration temperature correction (high temperature side) judgment voltage difference | White paper exit count setup |
| Staple counter | Toner concentration temperature correction (high temperature side) correction value | Trouble memory mode setup |
| Punch counter | Toner concentration temperature correction (low temperature side) cancel temperature | Fusing operation mode (anti-curling) |
| Machine right side paper exit counter | Toner concentration temperature correction (high temperature side) toner control delay time | CE mark conforming operation mode |
| | Multi-purpose width adjustment value | Maintenance cycle |
| | Manual feed width adjustment value | Print stop setup at developer life over |
| | Heater lamp temperature (center, normal control) | Saddle alignment operation priority mode |
| | Lead edge adjustment | |
| | Lead edge void set value | |
| | Rear edge void set value | |
| | Side edge setup | |
| | Print off-center adjustment value | |
| | Resist quantity adjustment value | |
| | Laser power adjustment value | |
| | PPD1 sensor adjustment | |
| | Process correction inhibit allow setup value | |
| | Developing bias rising correction wait time | |
| | Developing bias rising correction adjustment value | |
| | Built-in finisher jogger position adjustment | |
| | Saddle adjustment value | |

**(2) Adjustment values saved in SCANNER**

| Counters | Adjustment values | Others |
|---|---|---|
| Scan counter | Original lead edge adjustment value | Exposure mode setup value |
| SPF paper pass counter | Original off-center adjustment value | Serial number |
| SPF stamp counter | Original image loss quantity adjustment value | |
| | Magnification ratio adjustment value | |
| | SPF resist quantity adjustment value | |
| | Exposure motor speed adjustment value | |
| | Platen original detection adjustment value | |
| | SPF width detection adjustment value | |
| | Touch panel adjustment value | |
| | Exposure level adjustment value | |
| | Gamma change value | |
| | OC/SPF exposure correction value | |
| | Shading adjustment value (CCD/CIS) | |
| | CCD shading start position adjustment value | |

**(3) Adjustment values saved in MFP controller**

| Counters | Adjustment values | Others |
|---|---|---|
| Copy counter | FAX SOFT SW. etc. | Trouble history |
| Printer counter | | Jam history |
| FAX reception counter | | Destination setup |
| FAX transmission counter | | Language setup |
| Trouble counter | | Toner save mode setup |
| Jam counter | | 13" setup |
| | | Auditor setup |
| | | Serial number |
| | | Middle binding mode AMS setup |
| | | PC/Modem communication trouble detection YES/NO setup |
| | | Tag number setup |
| | | γ change value |
| | | Exposure mode setup |
| | | OC/SPF exposure correction value |
| | | Printer setup values |
| | | Network setup values |

## 5. Key operator program

| KEY OPERATOR PROGRAM | | | Set value(Default) | Remark |
|---|---|---|---|---|
| | | | Engine section LCD | |
| Copy function settings | Initial status settings | Paper tray, | | |
| | | exposure mode | | |
| | | copy ratio, | | |
| | | duplex mode | | |
| | | output mode | | |
| | Exposure adjustment | | 1~5*~9 | |
| | Rotation copy setting | | | |
| | Auto paper selection setting | | | |
| | 600dpi x 600dpi scanning mode | | 600x300dpi*/600x600dpi | |
| | Quick scan from document glass | | 600x300dpi*/600x600dpi* | |
| Device control | Original size detector setting | | INCH-1/INCH-2/AB-1*/AB-2 | |
| | Disabling of document feeder | | | |
| Scan to E-mail initial status settings | Default sender set | | | |
| | Initial file format setting | | | |
| | Compression mode at broadcasting | | | |

| KEY OPERATOR PROGRAM | | | Set value(Default)<br>Engine section LCD | Remark |
|---|---|---|---|---|
| Account control | Auditing mode | | ON/OFF* | |
| | Print per account | Print per account display | ON*/OFF | |
| | | Print per account print | | |
| | Reset account | | | |
| | Account number control | Enter new account number(5digits) | | |
| | | Delete account number | | |
| | | Change account number | | |
| | | Print account number | | |
| | No print if acc't # invalid | | Yes/No* | |
| Energy save | Auto power shut-off timer | | 15min/30min*/60min/120min/240min | |
| | Auto power shut-off | | Disable/Enable* | |
| | Preheat mode | | 15min*/30min/60min/120min/240min/None | |
| | Toner save | | ON/OFF* | |
| Operation panel settings | Auto clear setting | | 15sec/30sec/60sec*/OFF | |
| | Message display time | | 3sec/6sec*/9sec/12sec | |
| | Language setting | | American English/English*/French/Spanish | Depend on the distination |
| Device settings | Disable duplex unit | | Yes/No* | |
| | Disable stapler unit | | Yes/No* | |
| | Disable paper desk drawers | | Yes/No* | |
| | Disable finisher | | Yes/No* | |
| | Disable mail-bin stacker | | Yes/No* | |
| | Saddle stitch adjust | Paper size A4 | -3.0mm~0.0mm*~3.0mm (0.1mm unit) | With the saddle finisher installed |
| | | Paper size B4 | -3.0mm~0.0mm*~3.0mm (0.1mm unit) | |
| | | Paper size A4R | -3.0mm~0.0mm*~3.0mm (0.1mm unit) | |
| | | Paper size Ledger | -3.0mm~0.0mm*~3.0mm (0.1mm unit) | |
| | | Paper size Letter-R | -3.0mm~0.0mm*~3.0mm (0.1mm unit) | |
| Print key operator program list | | | | |
| Key operator code change | Set code | | 00000* | |
| System settings | Default settings | Print density level | Normal*/DAKER/DARKEST/LIGHTEST/LIGHTER | |
| | | Disable notice page printing | Yes*/No | |
| | | Disable test page printing | Yes*/No | |
| | | A4/LT auto select | ON/OFF* | |
| | Interface settings | Hexadecimal dump mode | ON/OFF* | |
| | | PDL for parallel port | Auto*/PostScript/PCL | |
| | | PDL for network port | Auto*/PostScript/PCL | |
| | | I/O timeout | 1sec~20sec*~999sec | |
| | | Port switching | Per job*/Timeout/Paralell OFF/Network OFF | |
| | Network settings | IP address setting | IP address 000.000.000.000* | |
| | | | IP subnet mask 000.000.000.000* | |
| | | | IP gateway 000.000.000.000* | |
| | | Enable TCP/IP | Yes*/No | |
| | | Enable NetWare | Yes*/No | |
| | | Enable EtherTalk | Yes*/No | |
| | | Enable NetBEUI | Yes*/No | |
| | | Reset the NIC | | |
| | Intialize/Store settings | Restore factory defaults | | |
| | | Store current configuration | | |
| | | Restore configuration | | |
| Product key | PS3 expansion kit | | | |
| | E-mail alert and status | | | |

# [9] ADJUSTMENTS

| | | | Adjustment item |
|---|---|---|---|
| 1 | Process section | A | High voltage output adjustment |
| 2 | Engine section | A | LSU right angle adjustment |
| | | B | Print off-center adjustment |
| | | C | Resist quantity adjustment |
| 3 | Scanner section | A | Scanner unit distortion adjustment |
| | | B | OC scan distortion adjustment |
| | | C | Vertical image distortion balance adjustment |
| | | D | Vertical image distortion balance adjustment |
| | | E | Vertical (sub scanning direction) distortion adjustment |
| | | F | Original detection light emitting unit height adjustment |
| | | G | Original size detection photo sensor check |
| | | H | Original size detection photo sensor adjustment |
| | | I | (D) SPF hinge height adjustment |
| | | J | (D) SPF hinge diagonal adjustment (Front) |
| | | K | Scan magnification ratio adjustment |
| | | L | OC scan lead edge adjustment |
| | | M | Original off-center adjustment |
| | | N | Image density adjustment |
| | | O | DSPF width detection adjustment |

## 1. Process section

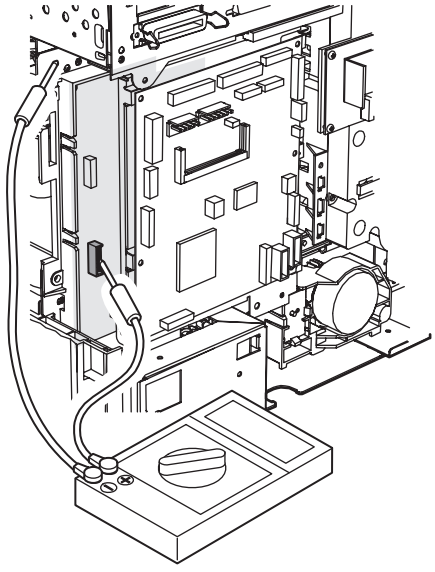
### A. High voltage output adjustment

#### (1) Developing bias output check and setup

1) Remove the rear cabinet to allow checking of the high voltage monitor output pin.
2) Execute the simulation of the target high voltage. (See the table below.)
3) Select the mode to be set with 10-key, and press START key.
4) Enter the set value with 10-key and press START key. The set value is outputted for 30 sec.
5) Apply a high voltage tester between the measurement pin and the frame.

Note: Take care not to short the measuring pin and the frame.

6) The unit stops after 30 sec of output.



| | | | Default | | Set range | Measurement pin | High voltage probe impedance |
|---|---|---|---|---|---|---|---|
| | | | Monitor output voltage | Set value | | | |
| MC grid MAIN GRID (SIM 8-2) | AUTO | AE mode | -650V±5V | 645 | 200~900 | CN2-7 | 100MΩ |
| | CHARACTER | Text mode | -650V±5V | 645 | 200~900 | | |
| | MIX | Text/Photo mode | -650V±5V | 645 | 200~900 | | |
| | PHOTO | Photo mode | -650V±5V | 645 | 200~900 | | |
| | PRINTER | Printer mode | -650V±5V | 645 | 200~900 | | |
| | FAX | Fax mode | -650V±5V | 645 | 200~900 | | |
| Transfer current (THV+ (SIM 8-6) | FRONT | Front | | 45PPM : 267<br>35PPM : 220 | 0~620 | | |
| | BACK | Back | | 45PPM : 310<br>35PPM : 267 | 0~620 | | |
| Developing bias DV BIAS (SIM 8-1) | AUTO | AE mode | -500V±5V | 485 | 0~745 | CN2-1 | 100MΩ |
| | CHARACTER | Text mode | -500V±5V | 485 | 0~745 | | |
| | MIX | Text/Photo mode | -500V±5V | 485 | 0~745 | | |
| | PHOTO | Photo mode | -500V±5V | 485 | 0~745 | | |
| | PRINTER | Printer mode | -500V±5V | 485 | 0~745 | | |
| | FAX | Fax mode | -500V±5V | 485 | 0~745 | | |
| | PLUS | Positive bias | +150V±5V | 150 | 0~255 | | |
| Separation voltage SHV (SIM 8-17) | FRONT | Front | +1.25V±0.1V | 45PPM : 160<br>35PPM : 120 | 0~375 | CN2-3 | 10MΩ |
| | BACK | Rear | +1.25V±0.1V | 45PPM : 160<br>35PPM : 120 | 0~375 | | |
| Transfer voltage THV (SIM 8-17) | | | -800V±10V | 780 | 0~1250 | CN2-5 | 10GΩ |

# 2. Engine section

## A. LSU right angle adjustment

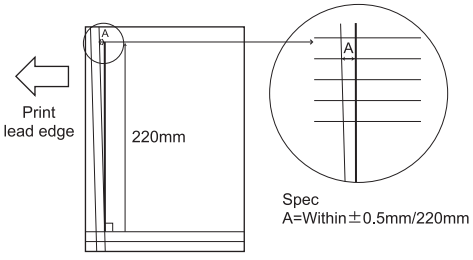
This adjustment is required in the following cases:
•When the LSU is replaced.
•When a distortion is generated in printer output.
(Check with self-print pattern "71.")

After completion of this adjustment, perform the following adjustments:
•Print off-center adjustment
•Void area adjustment

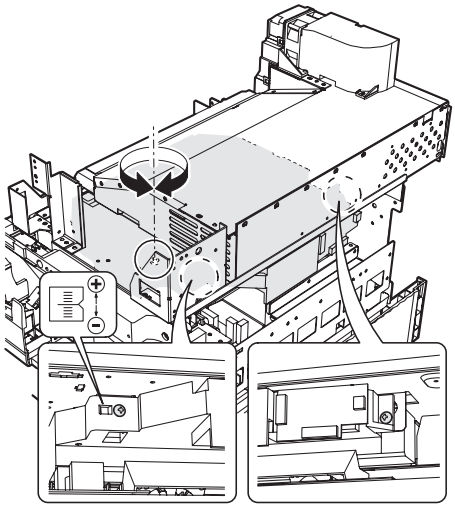
1) Execute SIM 64-1.
2) Make self-print of print pattern 71 and grid pattern from tray 1.
3) Check the self-printout.

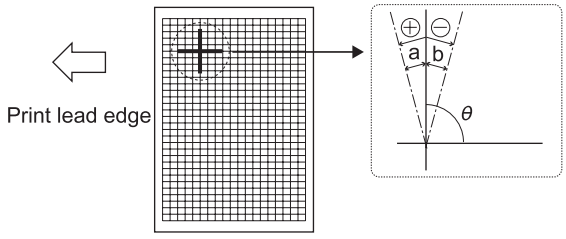
**<Right angle check method>**

<1> Make a self-print pattern 71.
<2> Draw a line perpendicular to the sub scanning direction (paper transport direction) with a square.
At that time, let the point of intersection of the perpendicular line and the horizontal line be the start point.
<3> Measure distance A at a position 220mm apart from the point of intersection of the vertical line outputted by self print and the line drawn with a square.
<4> Check that distance A satisfies the specification below.




4) If the printout is out of the specifications, perform the following procedures.
5) Loosen two screws (M4) which are fixing the LSU.
6) Turn the adjustment screw on the upper side (rear of the printer operation panel) clockwise and counterclockwise to adjust the height of the LSU front side.
7) After completion of adjustment, tighten the two fixing screws of the LSU unit.
8) Print the grid pattern again and check it.
9) Repeat procedures 7) to 10) until the printout is in the specified range.
10) After completion of the work, apply screw lock to the screws.






**<Specifications>**

| | Measurement position | Specification | Set value |
|---|---|---|---|
| Print distortion adjustment | SIM 64-1 Self-print pattern 71 | θ =90°±0.13° | Adjustment scale 1 = about 0.25° shift in θ |

## B. Print off-center adjustment

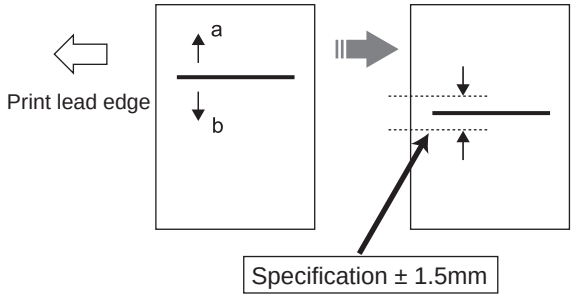
This adjustment is performed in the following cases:
•When the center is misaligned in printing.
•When the LSU is replaced.
•When the option paper feed unit or the automatic duplex unit is installed or replaced.

Before execution of this adjustment, the following adjustments must have been completed.
•LSU right angle adjustment
•Print magnification ratio adjustment

After completion of this adjustment, the following adjustment must be executed.
•Void area setup

1) Execute SIM 50-10.
2) Set the paper fed tray and the magnification ratio for the adjustment.
3) After entering the adjustment values, press START key, and printing is started.
4) Check the off-center (distance from the paper edge) of the printed copy. Repeat procedure 2) until the specification is satisfied.

* When adjusting the off-center of LCC1, load paper only on the left tray of LCC.
When adjusting the off-center of LCC2, load paper only on the right tray of LCC.
This is because no distinction of right and left is made when selecting a tray.



| | Adjustment position | | Measurement reference | Specification | Set value | | |
|---|---|---|---|---|---|---|---|
| | | | | | Default | Range | |
| Print off-center SIM 50-10 | Tray 1 | Tray 1 | Output pattern center line | 0±1.5mm | 50 | 0 - 99 | Set value 1: 0.1mm shift |
| | Tray 2 | Tray 2 | | | | | |
| | Tray 3 | Tray 3/LCC left | | | | | |
| | Tray 4 | Tray 4/LCC right | | | | | |
| | MFT | Manual feed | | | | | |
| | ADU | Duplex | | | | | |

•For the duplex mode (Single ? Duplex), add 10 to the above set value.
•When the print line is shifted toward a from the paper center, decrease the value.
•When the print line is shifted toward b from the paper center, increase the value.

### C. Resist quantity setup

•This adjustment required a fine accuracy.
Do not change the default as far as possible.

This adjustment is performed in the following cases:
•When the void quantity is changed by the paper feed tray.
•When paper is skewed.

Before performing this adjustment, the following adjustments must have been completed.
•LSU right angle adjustment
•Print magnification ratio adjustment
•Print off-center setup
•Void area setup

1) Execute SIM 51-2.
2) Adjust the resist quantity so that paper is transferred stably.

**<Factory setup value>**

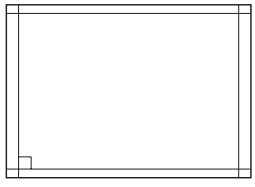
| | | |
|---|---|---|
| 45PPM | BPT | 55 |
| | T1 | 60 |
| | T2 | 50 |
| | DESK | 50 |
| | ADU | 50 |
| 35PPM | BPT | 60 |
| | T1 | 65 |
| | T2 | 55 |
| | DESK | 55 |
| | ADU | 55 |

## 3. Scanner section

### A. Scanner unit distortion adjustment

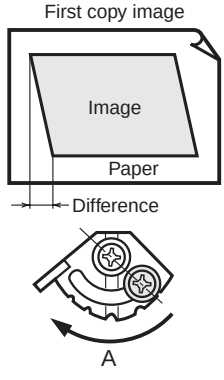
Before executing this adjustment, the following adjustment must have been completed.
•LSU right angle adjustment

1) Make a test chart as shown below. (Make a self-print pattern 71.)

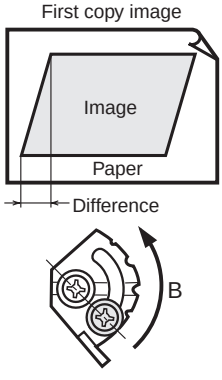


2) Make a copy from the table glass, and check it.
At that time, set the test chart correctly. If it is set in a distorted position, the adjustment cannot be made correctly.
3) If the output value is not in the specified range, perform the following adjustment.
4) Adjust the distortion.

**[Fig. 1]**




**[Fig. 2]**



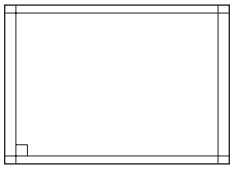

**•In the case of Fig. 1**
Shift cam A in the direction A by the difference in the copy image.
For one scale (one groove), shift by 0.5mm.
After shifting, tighten the fixing screw (M3 x 12) of cam A and make a copy again, and check the copy again to insure that there is no distortion.
**•In the case of Fig. 2**
Shift cam A in the direction B by the difference in the copy image.
For one scale (one groove), shift by 0.5mm.
After shifting, tighten the fixing screw (M3 x 12) of cam A and make a copy again, and check the copy again to insure that there is no distortion.

## B. OC scan distortion adjustment (MB-B rail height adjustment)

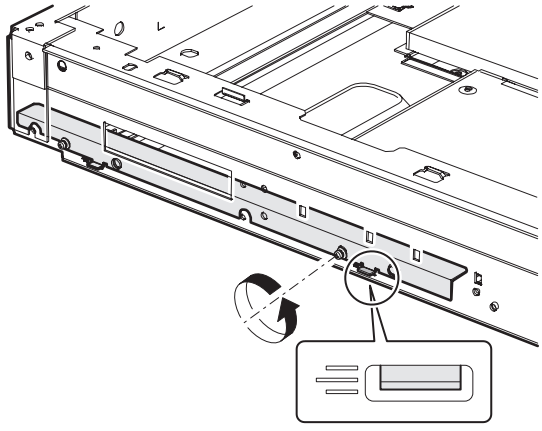
•This adjustment requires a high-level preciseness.
It is easier to perform the scanner unit distortion adjustment previously described.

Before performing this adjustment, the following adjustment must have been completed.
•LSU right angle adjustment

1) Make a test chart as shown below. (Print a self-print pattern 71.)



2) Make a copy from the table glass, and check it.
   At that time, set the test chart correctly. If it is set in a distorted position, the adjustment cannot be made correctly.
3) If the output value is not in the specified range, perform the following adjustment.
4) Remove the front cabinet in front of the scanner, and check that installing position of the MB rail.
5) Loosen the screw at the right of the MB rail to adjust.

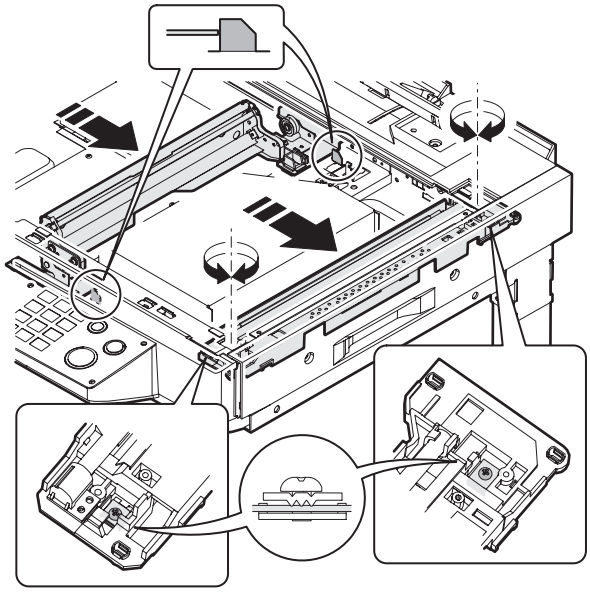


**<Specifications>**

| Measurement point | Specification | Set value | |
|---|---|---|---|
| OC scan distortion adjustment | Angle θ in the above figure | θ = 90°±0.13° | 1 scale = about 0.25°shift in θ |

## C. Vertical image distortion balance adjustment (Copy lamp unit installing position adjustment)

1) Insert the front/rear mirror base drive wire into the frame groove and press and fix it with the wire holder. At that time, do not tighten the wire fixing screw. Change the direction of the lamp positioning plate. (F and R)
2) Push the copy lamp unit onto the positioning plate, and tighten the wire fixing screw.



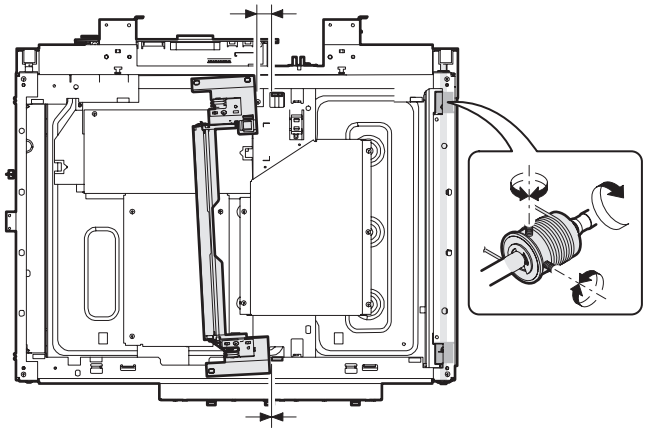
**<Note for assembling the copy lamp unit>**

After fixing, manually shift the copy lamp unit a few times to check that it moves smoothly.

## D. Vertical image distortion balance adjustment (No. 2/3 mirror base unit installing positionadjustment)

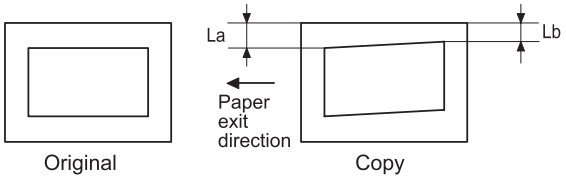
This adjustment is to adjust the parallelism of the mirror base to the OPC drum surface and the original surface.

1) Manually turn the mirror base drive pulley to bring mirror base B into contact with mirror base positioning plate.
   If, at that time, the front frame side and the frame side of mirror base B are brought into contact with the mirror base positioning plate simultaneously, the parallelism is correct and there is no need for adjustment.

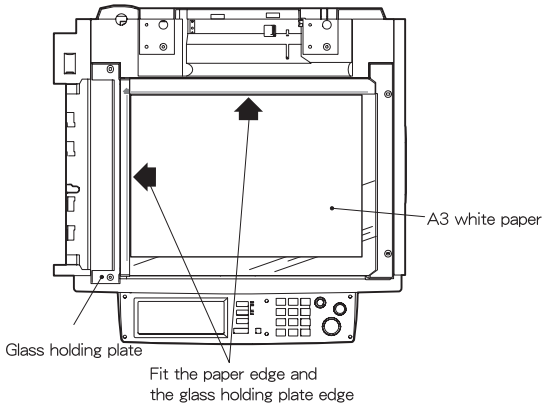


## E. Vertical (sub scanning direction) distortion adjustment [Winding pulley position adjustment]

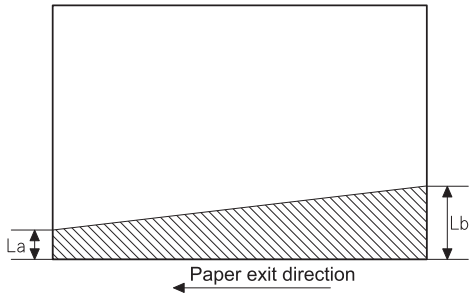
This adjustment is executed in the following cases:
•When the mirror base drive wire is replaced.
•When the lamp unit, or No. 2/3 mirror holder is replaced.
•When a copy shown below is made.




1) Set A3 white paper on the original table as shown below.




2) With the original cover open, make a normal (X 1.0) copy.
3) Measure the black distance at the lead edge and the rear edge of the copy paper.

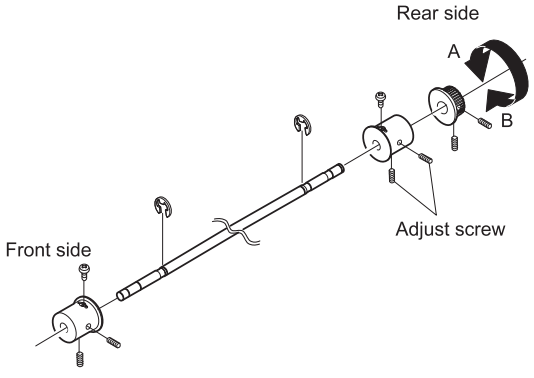



La : Lead edge black background section
Lb : Rear edge black background section

If La = Lb, the procedures 4) through 7) are not required.

4) Loosen the fixing screw of the front or the rear frame mirror base drive pulley.

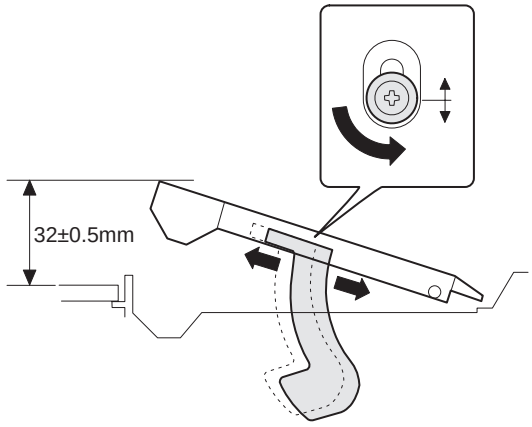
•If La < Lb, turn the rear frame mirror base drive pulley in direction B. (Do not move the mirror base drive pulley shaft.)
•If La > Lb, turn the rear frame mirror base drive pulley in direction A. (Do not move the mirror base drive pulley shaft.)




5) Tighten the fixing screw of the mirror base drive pulley.
6) Perform procedures 1) through 3).
7) If La is not equal to Lb, perform procedures 4) and 5).
If La = Lb, the adjustment is completed.
Repeat procedures 1) through 6) until La = Lb.

## F. Height adjustment of original detection light emitting unit

1) Execute SIM 41-3.
2) Open the original cover. Press the original detection light-emitting unit gradually with your finger to check the height at which OCSW display on the LCD is highlighted.




3) Open the original detection light-emitting unit gradually to check the height at which OCSW display turns to the normal state.
4) If the heights are out of the specified range in procedures 2) and 3), adjust the height of the original detection light emitting unit by shifting the adjustment screw.

SIMULATION 41-3
PD SENSOR DATA DISPLAY.
OCSW

| | | | |
|---|---|---|---|
| PD1[128]: | 200 | PD2[128]: | 200 |
| PD3[128]: | 50 | PD4[128]: | 52 |
| PD5[128]: | 51 | PD6[128]: | 50 |
| PD7[128]: | 52 | | |

5) After completion of adjustment, press the original detection light emitting unit fully downward with your finger and release it. Check that the original detection light-emitting unit moves up smoothly.

**<Specification>**

| | Specification | Adjustment position | |
|---|---|---|---|
| Original size detection position | 32±0.5mm | Height adjustment screw | SIM 41-3 |

## G. Orignal size detection photo sensor check

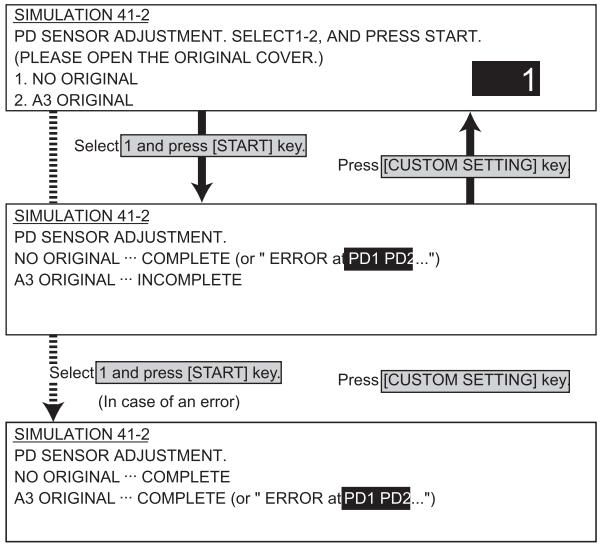
1) Execute SIM 41-1.
2) Put A3 (or WLT) paper on the table glass, and check that all the sensor displays (except for OCSW) on the LCD are highlighted.
3) Gradually move the unit to the left, and check that the highlighted sensor displays turn off one by one sequentially.

SIMULATION 41-1
PD SENSOR CHECK..
OCSW [PD1] [PD2] [PD3] PD4 PD5 PD6 PD7
(The detected sensors are highlighted.)

## H. Orignal size detection photo sensor adjustment

1) Execute SIM 41-2.
* At that time, check that the scanner mirror base is at the home position.
2) Open the document cover. Select 1 without placing paper on the table glass, and press START.
3) When COMPLETE is displayed on the LCD, press CUSTOM SETTING to return to the initial screen.
4) Place A3 (or WLT) paper on the table glass, select 2 and press START.
   When COMPLETE is displayed, the adjustment is normally completed.

* If ERROR is displayed, the error PD sensor is displayed.

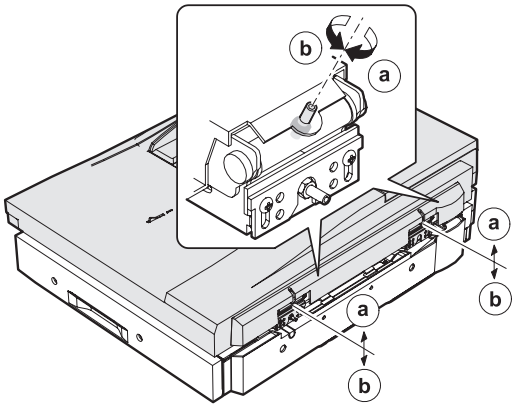

SIMULATION 41-2
PD SENSOR ADJUSTMENT. SELECT1-2, AND PRESS START.
(PLEASE OPEN THE ORIGINAL COVER.)
1. NO ORIGINAL
2. A3 ORIGINAL
1
Select 1 and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 41-2
PD SENSOR ADJUSTMENT.
NO ORIGINAL ··· COMPLETE (or " ERROR at PD1 PD2...")
A3 ORIGINAL ··· INCOMPLETE
Select 1 and press [START] key.
(In case of an error)
Press [CUSTOM SETTING] key.
SIMULATION 41-2
PD SENSOR ADJUSTMENT.
NO ORIGINAL ··· COMPLETE
A3 ORIGINAL ··· COMPLETE (or " ERROR at PD1 PD2...")

**<Specification>**

| | Specification | Adjustment |
|---|---|---|
| Document size detection photo sensor adjustment | COMPLETE | SIM 41-2 |

## I. DSPF hinge height adjustment

1) Close the DSPF.
2) Check that the dove and the reference plate are in contact with the table glass. If not, adjust with the setscrew.




**<Specification>**

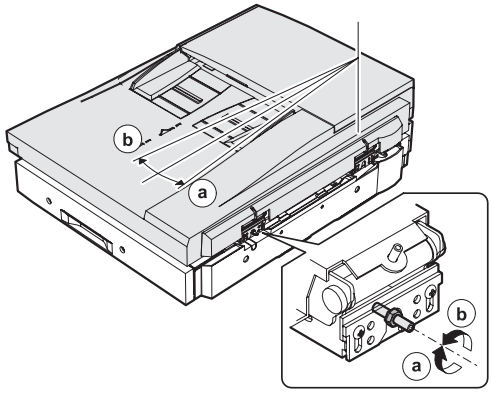
| | Specification | Adjustment position |
|---|---|---|
| Distance between dove (Reference plate) and table glass | 3-point contact (Left front/Left rear/Right front when viewed from the front) | Hinge adjustment set screw |

## J. DSPF hinge diagonal adjustment (Front)

Before executing this adjustment, the following adjustments must have been completed.
•LSU right angle adjustment
•DSPF height adjustment

1) Make a test chart as shown below. (Print a self-print pattern 71.)
2) Make a copy with DSPF.
3) Measure the rear side and check that the value is in the specified range.

4) If the value is not in the specified range, loosen the nut which is fixing the hinge R adjustment screw, and adjust the adjustment screw.
5) Make a copy again, and check again that the value is in the specified range.
6) Tighten the nut to fix the adjustment screw.



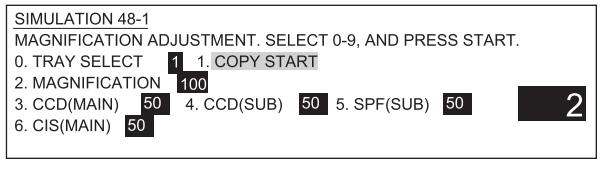

**<Specification>**

| | Specification | Adjustment position |
|---|---|---|
| Skew feed | Within ±3mm | Hinge R adjustment screw |
| Lead edge skew | A4 or less: 1mm or less<br>Greater than A4: 1.5mm or less | Eccentric screw for CIS adjustment |

## K. Scan magnification ratio adjustment

### (1) OC scan magnification ratio adjustment

1) Place a print of self-print pattern (A3 or WLT) 70 or a scale on the table glass.
2) Close the original cover, and make a copy.
3) Check that the value is within the specification.
4) If not, adjust with SIM 48-1.
5) Make a copy again and check again that the value is within the specification.

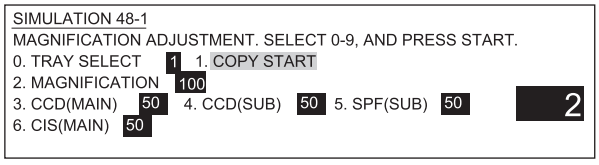

SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. CCD(MAIN) 50 4. CCD(SUB) 50 5. SPF(SUB) 50
6. CIS(MAIN) 50
2

**<Specification>**

| | Specification | Adjustment position | Adjustment value |
|---|---|---|---|
| Main scan direction magnification ratio | ±0.5% | SIM48-1 | Set value 1: 0.1% change |
| Sub scan direction magnification ratio | | | |

### (2) DSPF scan magnification ratio

1) Set a chart of print pattern 70 on SPF/DSPF.
2) Make a copy. (In the case of DSPF back copy, make a single copy in the duplex mode.)
3) Check that the output paper satisfies the specifications.
4) If not, adjust with SIM 48-1.
5) Make a copy again, and check that the output paper satisfies the specifications.


SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. CCD(MAIN) 50 4. CCD(SUB) 50 5. SPF(SUB) 50
6. CIS(MAIN) 50
2

**<Specifications>**

| | Specifications | Adjustment position | Adjustment value |
|---|---|---|---|
| SPF sub scan direction magnification ratio | ±0.5% | SIM 48-1 | Set value 1: 0.1% change |
| DSPF main scan (back) direction magnification ratio | | | |

* The SPF main scan direction magnification ratio is common with OC.

## L. OC scan lead edge adjustment

Before executing this adjustment, the following adjustment must have been completed.

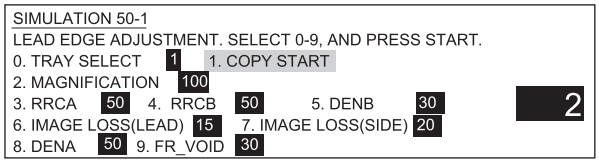
•OC scan magnification ratio adjustment

1) Set an original on the original table.
2) Enter SIM 50-1.
3) Make a copy.
4) Select the number to be set on the right of the LCD, and perform the adjustment of each item.
5) Select "3: RRC-A" and change the value with 10-key to perform the copy adjustment.
6) Select "4: RRC-B" so that the distance between the paper lead edge and the copy image lead edge is within 3.0mm. Change the value with 10-key and perform the copy adjustment.
7) Check that the lead edge shift is within 3.0mm. If not, perform the fine adjustment of procedure 5) and 6).
8) Select "5: DEN-B" so that the white spot in the latter half of copy (rear edge void) is within 3.0mm. Change the value with 10-key and perform the copy adjustment.
   (The rear void adjustment is changed by the step of 0.1mm.)

•When the rear edge void is too small, increase the value.

•When the rear edge void is too great, decrease the value.

9) Press [CA] key to cancel the simulation.


SIMULATION 50-1
LEAD EDGE ADJUSTMENT. SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. RRCA 50 4. RRCB 50 5. DENB 30
6. IMAGE LOSS(LEAD) 15 7. IMAGE LOSS(SIDE) 20
8. DENA 50 9. FR_VOID 30
2

**<Specification>**

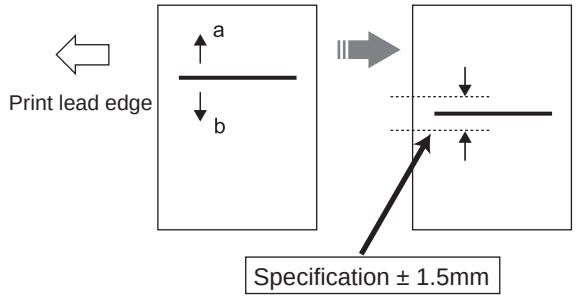
| | | Specifi-cation | Set value | | |
|---|---|---|---|---|---|
| | | | Default | Range | |
| RRCA | Original scan start position | | 50 | 0 ~ 99 | Set value 1: 0.2mm shift |
| RRCB | Image and paper position adjustment on the OPC drum | | 50 | 0 ~ 99 | Set value 1: 0.1mm shift |
| DENA | Lead edge void adjustment | Total 8mm or less | 35 | 0 ~ 99 | Set value 1: 0.1mm shift |
| DENB | Rear edge void adjustment | | 35 | 0 ~ 99 | Set value 1: 0.1mm shift |
| IMAGE LOSS (LEAD) | Both sides image loss | 4.0mm or less | 15 | 0 ~ 99 | Set value 1: 0.1mm shift |
| IMAGE LOSS (SIDE) | F/R void quantity | Total 8mm or less | 20 | 0 ~ 99 | Set value 1: 0.1mm shift |
| FR_VOID | | Total 8mm or less | 35 | 0 ~ 99 | Set value 1: 0.1mm shift |

## M. Original off-center adjustment

Before execution of this adjustment, the following adjustment must have been completed.

•LSU right angle adjustment
•Print off-center adjustment
•Print magnification ratio adjustment

1) Set an original on the original table.
2) Execute SIM 50-12.
3) Select the paper feed tray and the magnification ratio.
4) After entering the adjustment value, pres START key, and printing is started.
5) Check the off-center (distance from the paper lead edge) of the printed copy. Repeat procedure 2 until the printed copy satisfies the specifications.




| | Adjustment position | | Measurement reference | Specification | Set value | | |
|---|---|---|---|---|---|---|---|
| | | | | | Default | Range | |
| Print off-center SIM 50-10 | Tray 1 | Tray 1 | Output pattern center line | As shone in the table below. | 50 | 0 - 99 | Set value 1: 0.1mm shift |
| | Tray 2 | Tray 2 | | | | | |
| | Tray 3 | Tray 3/LCC left | | | | | |
| | Tray 4 | Tray 4/LCC right | | | | | |
| | MFT | Manual feed | | | | | |
| | ADU | Duplex | | | | | |

•For the duplex mode (Single ? Duplex), add 10 to the above set value.
•When the print line is shifted toward a from the paper center, decrease the value.
•When the print line is shifted toward b from the paper center, increase the value.

**<Specifications>**

| | | |
|---|---|---|
| Machine (OC mode) | Single | ±1.5mm |
| | Duplex | ±1.7mm |
| Overall (DSPF) | Single S - S | ±2.8mm |
| | Single D - S | ±3.5mm |
| | Duplex S - D | ±3.0mm |
| | Duplex D - D | ±3.5mm |

## N. Image density adjustment

The image density adjustment is required for the following copy quality mode by using the simulation.
There are two methods; the collective adjustment and the individual adjustment of the copy quality mode.

•Copy mode

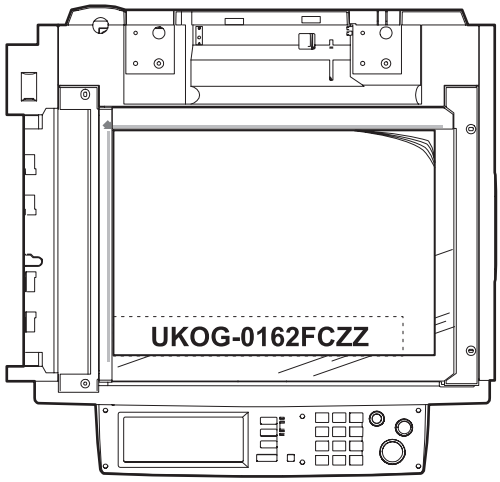
| Copy quality mode Collective | | adjustment | Individual adjustment |
|---|---|---|---|
| Binary value mode | Auto mode | SIM46-2 | |
| | Character mode | | SIM46-9 |
| | Character/Photo mode | | SIM46-10 |
| | Photo mode | | SIM46-11 |

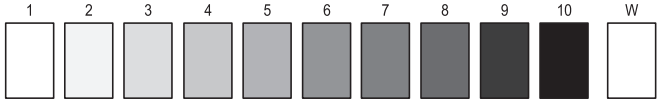
•FAX mode

| | | | adjustment | Individual adjustment |
|---|---|---|---|---|
| Normal mode | Binary value mode | AUTO | SIM46-12 | SIM46-13 |
| | | LIGHT | | |
| | | DARK | | |
| Small text mode | Binary value mode | AUTO | | SIM46-14 |
| | | LIGHT | | |
| | | DARK | | |
| | Half tone mode | AUTO | | |
| | | LIGHT | | |
| | | DARK | | |
| Fine mode | Binary value mode | AUTO | | SIM46-15 |
| | | LIGHT | | |
| | | DARK | | |
| | Half tone mode | AUTO | | |
| | | LIGHT | | |
| | | DARK | | |
| Super fine mode | Binary value mode | AUTO | | SIM46-16 |
| | | LIGHT | | |
| | | DARK | | |
| | Half tone mode | AUTO | | |
| | | LIGHT | | |
| | | DARK | | |

### (1) Test chart setting

1) Place a test chart (UKOG-0162FCZZ) on the original table as shown below.
2) Place several sheets of A3 (11 x 17) white paper (Sharp's specified paper) on the test chart at the rear reference.




Test chart comparison

| UKOG-0162FCZZ DENSITY No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | W |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UKOG-0089CSZZ DENSITY No. | 0.1 | | 0.2 | | 0.3 | | | | 0.5 | 1.9 | 0 |
| KODAK GRAY SCALE | | 1 | | 2 | | 3 | | 4 | | 19 | A |
| SHARP CORPORATION MADE IN JAPAN | | | | | | | | | | | |

### (2) Density adjustment procedure

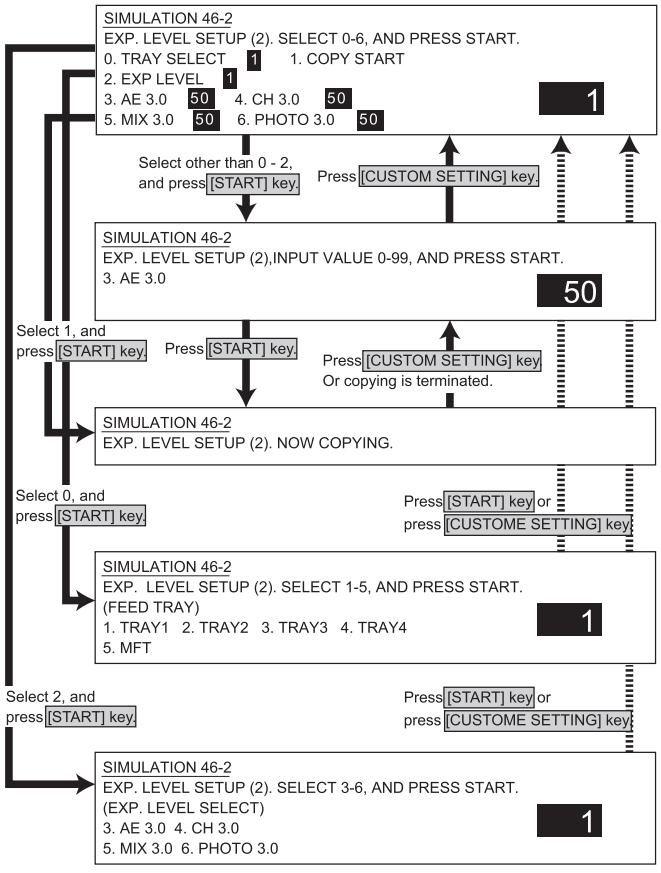
**a. Collective adjustment of two or more copy quality modes**

Normally this adjustment is performed with SIM 46-2. In this method, two or more copy density adjustments in different modes can be adjusted collectively.

1) Execute SIM 46-2.

**(Binary value mode)**

| Quality mode | Linked simulation data |
|---|---|
| AE3.0 (AE) | |
| CH3.0 (Character) | sim46-9 |
| MIX3.0 (Character/Photo) | sim46-10 |
| PH3.0 (Photo) | sim46-11 |


SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 0-6, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. AE 3.0 50 4. CH 3.0 50
5. MIX 3.0 50 6. PHOTO 3.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2),INPUT VALUE 0-99, AND PRESS START.
3. AE 3.0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 46-2
EXP. LEVEL SETUP (2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. MFT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 3-6, AND PRESS START.
(EXP. LEVEL SELECT)
3. AE 3.0 4. CH 3.0
5. MIX 3.0 6. PHOTO 3.0
1

2) Press the COPY button to make a copy.
Check that the copy density is as shown in the table below.
If not, change the adjustment value.

•Adjustment spec

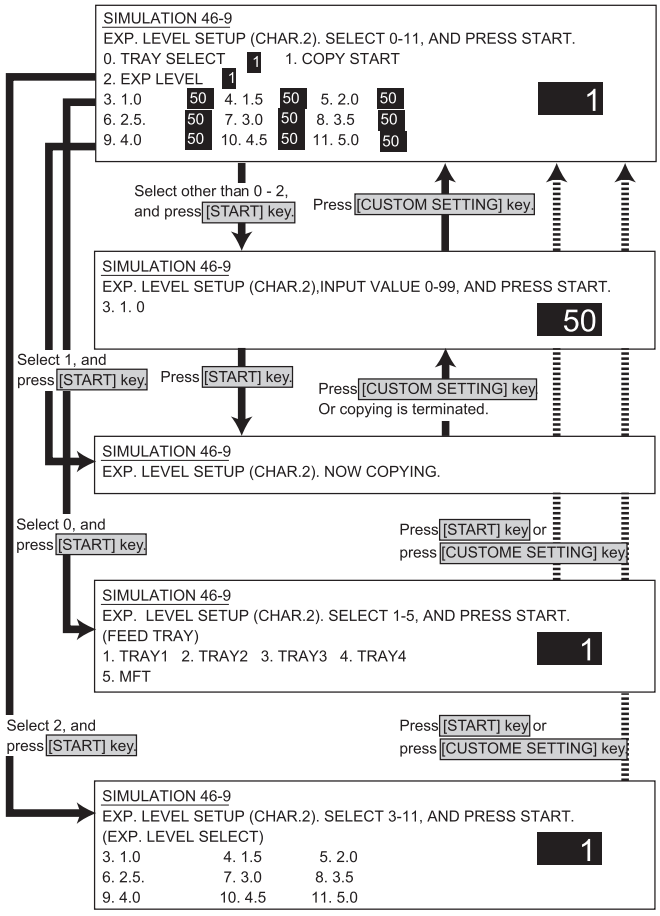
| Mode | EXP. | Chart No. | Adjustment level | Chart No. | Adjustment level |
|---|---|---|---|---|---|
| Character | 3 | 3 | Copied | 2 | Not copied |
| Character/ Photo | 3 | 3 | Copied | 2 | Not copied |
| Photo | 3 | 3 | Copied | 2 | Not copied |
| Auto | | 3 | Copied | 2 | Not copied |

If the copy density is too light, increase the adjustment value.
If the copy density is too dark, decrease the adjustment value.
Adjustment range: 30 - 170

**b. Individual adjustment of each copy quality mode**

This adjustment is used when a different density level for different copy quality mode is required. SIM 46-5 to -7 and SIM 46-9 to -11 are used.

1) Execute the simulation corresponding to the copy quality mode to be adjusted.


SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 0-11, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. 1.0 50 4. 1.5 50 5. 2.0 50
6. 2.5. 50 7. 3.0 50 8. 3.5 50
9. 4.0 50 10. 4.5 50 11. 5.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2),INPUT VALUE 0-99, AND PRESS START.
3. 1. 0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. MFT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 3-11, AND PRESS START.
(EXP. LEVEL SELECT)
3. 1.0 4. 1.5 5. 2.0
6. 2.5. 7. 3.0 8. 3.5
9. 4.0 10. 4.5 11. 5.0
1

2) Press the COPY button to make a copy

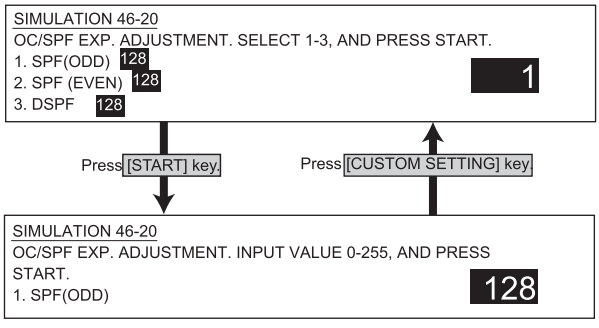
Check that the copy density is as shown in the table below. If not, change the adjustment value.

For the auto mode, there is only one adjustment value. For the other modes, the adjustment value for each density level must be adjusted.

**c. Gain adjustment in DSPF back (CIS) scan**

When images are too dark or too bright in scanning the back (CIS) of DSPF, perform the following procedures.

1) Make a duplex copy of a sample, and check the density of canning the back.
2) Execute SIM 46-20.

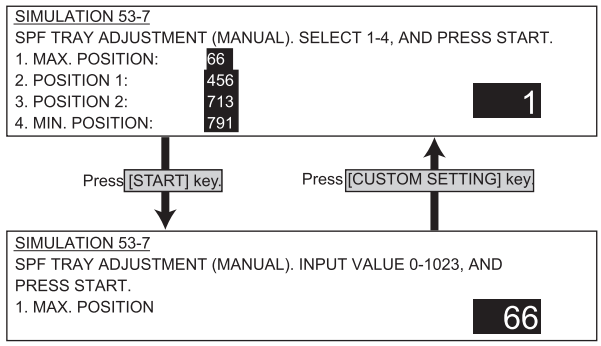



3) Select "3.DSPF" and adjust the gain of DSPF.
   When the DSPF gain setup value is increased, the image becomes brighter.
   When the DSPF gain setup value is decreased, the image becomes darker.

## O. DSPF width detection adjustment

### (1) When replacing DSPF unit

1) Use SIM53-7 to enter the value indicated on the side of the right hinge of the DSPF unit.

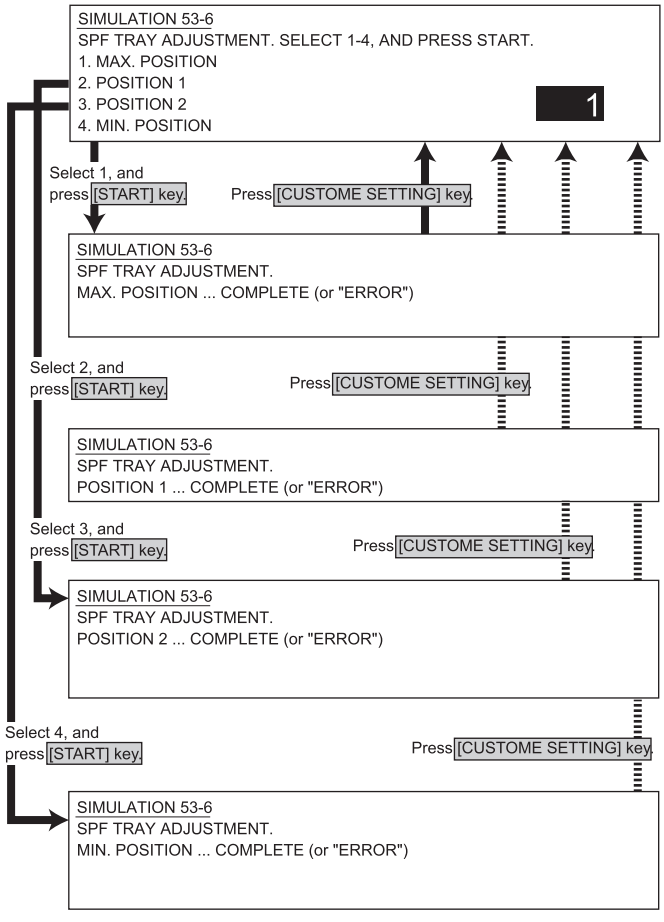



### (2)When replacing the original width detection volume.

Execute SIM53-6 to perform the machine DSPF original tray size adjustment.

1) Extend the guide to MAX. position, select 1, and press START. When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.
2) Move the guide to A4R position, select 2, and press START. When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.
3) Move the guide to A5R position, select 3, and press START. When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.
4) Move the guide to MIN. position, select 4, and press START. When COMPLETE is displayed, the adjustment is completed.

If ERROR is displayed in procedures 1) - 4), repeat the adjustment again.


SIMULATION 53-6
SPF TRAY ADJUSTMENT. SELECT 1-4, AND PRESS START.
1. MAX. POSITION
2. POSITION 1
3. POSITION 2
4. MIN. POSITION
1
Select 1, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
MAX. POSITION ... COMPLETE (or "ERROR")
Select 2, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
POSITION 1 ... COMPLETE (or "ERROR")
Select 3, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
POSITION 2 ... COMPLETE (or "ERROR")
Select 4, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
MIN. POSITION ... COMPLETE (or "ERROR")

# [10] SIMULATIONS

## 1. Entering the simulation mode

Enter the copy mode and perform the following procedures.
[P] → [*] → [C] → [*] → [Main code] → [START] → [Sub code] → [START]

## 2. Switching the simulation mode

Press [USER SETTING] to return to the code entry screen.

## 3. Canceling the simulation mode

Press CA key to cancel the simulation mode.

## 4. Simulation list

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 1 | 1 | Used to check the operations of the scanner (reading) unit and its control circuit. | Operation test, check | Scanner (reading) | Operation | |
| | 2 | Used to check the operations of the sensors and detectors in the scanner (reading) unit and their control circuits. | Operation test, check | Scanner (reading) | Operation | |
| 2 | 1 | Used to check the operations of the automatic document feeder unit and its control circuit. | Operation test, check | DSPF | Operation | |
| | 2 | Used to check the operations of the sensors and detectors in the automatic document feeder unit and their control circuits. | Operation test, check | DSPF | Operation | |
| | 3 | Used to check the operation under load in the automatic document feeder unit and their control circuits. | Operation test, check | DSPF | Operation | |
| 3 | 2 | Used to check the operations of the sensors and detectors in the finisher and their control circuits. | Operation test, check | Finisher | Operation | |
| | 3 | Used to check the operation under load in the finisher and their control circuits. | Operation test, check | Finisher | Operation | |
| | 6 | Used to adjust the stacking capacity of the finisher. (Used to adjust the alignment plate (jogger) stop position in the finisher paper width direction. The adjustment is made by changing the alignment plate home position in the paper width direction by software. ) | Adjustment | Finisher | Operation | |
| | 10 | Used to adjust the console finisher (AR-FN7). | Adjustment | Finisher | Operation | |
| | 20 | Used to check the mail bin stacker (AR-MS1) sensor. | Operation test, check | Mail bin stacker | Operation | |
| | 21 | Used to check the operations of the mail bin stacker loads. | Operation test, check | Mail bin stacker | Operation | |
| 4 | 2 | Used to check the operations of the sensors and detectors in the paper feed section (desk paper feed/large capacity trays) and their control circuits. | Operation test, check | Paper feed | Operation | |
| | 3 | Used to check the operation under load in the paper feed section (desk paper feed/large capacity trays) and their control circuits. | Operation test, check | Paper feed | Operation | |
| 5 | 1 | Used to check the operations of the lamps and LCD on the operation panel and their control circuits. | Operation test, check | Operation (display, operation) | Operation | |
| | 2 | Used to check the operations of the heater lamp and its control circuit. | Operation test, check | Fusing | Operation | |
| | 3 | Used to check the operations of the copy lamp and its control circuit. | Operation test, check | Scanner (reading) | Operation | |
| 6 | 1 | Used to check the operation under load (clutches and solenoids) in the paper transport system and their control circuits. | Operation test, check | Paper transport (paper exit, switchback, transport) | Operation | |
| | 2 | Used to check the operations of each fan motor and its control circuit. | Operation test, check | Others | Operation | |
| 7 | 1 | Used to set the aging conditions. | Setup | | Operation | |
| | 6 | Used to set the intermittent aging cycle. | Setup | | Operation | |
| | 8 | Used to set Enable/Disable of warm-up time display. | Setup | | Operation | |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 8 | 1 | Used to check and adjust the developing bias voltage in each print mode and its control circuit. | Adjustment, operation test, check | Process (OPC drum, developing, transfer, cleaning) | | |
| | 2 | Used to check and adjust the main charger grid voltage in each print mode and its control circuit. | Adjustment, operation test, check | Process (OPC drum, developing, transfer, cleaning) | | |
| | 6 | Used to check and adjust the transfer charger current and its control circuit. | Adjustment, operation test, check | Process (OPC drum, developing, transfer, cleaning) | | |
| | 17 | Used to set and check the transfer roller output. | Operation test, check | Process (OPC drum, developing, transfer, cleaning) | Operation | |
| 9 | 1 | Used to check the operation under load (clutches and solenoids) in the duplex section and their control circuits. | Operation test, check | Duplex | Operation | |
| | 2 | Used to check the sensors and detectors in the duplex section and their control circuits. | Operation test, check | Duplex | Operation | |
| 10 | 0 | Used to check the operation of the toner motor and its control circuit.<br>(Note)<br>Do not execute this simulation with toner in the toner hopper. If executed, toner will enter the developing section, causing an overtoner trouble. Be sure to remove toner motor from the toner hopper before execution. | Operation test, check | Process (OPC drum, developing, transfer, cleaning) | Operation | |
| 13 | 0 | Used to cancel the self diag "U1" trouble.<br>(Only when FAX is installed.) | Cancel<br>(incase of a trouble) | | Trouble | |
| 14 | 0 | Used to cancel the self diag "U1/LCC/US/PF" troubles. | Cancel<br>(incase of a trouble) | | Trouble | Error |
| 15 | 0 | Used to cancel the self diag "U6 (09/20/21/22)" trouble. | Cancel<br>(incase of a trouble) | Paper feed | Trouble | |
| 16 | 0 | Used to cancel the self diag "U2" trouble. | Cancel<br>(incase of a trouble) | | Trouble | Error |
| 17 | 0 | Used to cancel the self diag "PF" trouble<br>(when copy is inhibited by the host computer). | Cancel<br>(incase of a trouble) | Communication (RIC/MODEM) | Trouble | Error |
| 21 | 1 | Used to set the maintenance cycle. | Setup | | Spec | Counter |
| 22 | 1 | Used to check the print count in each section and in each operation mode. (Used to check the maintenance timing.) | Adjustment, setup, operation data output, check (display, print) | | Counter | |
| | 2 | Used to check the number of total misfeed and troubles.<br>(If the number of misfeed is considerably great, the machine must be repaired. The misfeed rate is obtained by dividing this count by the total counter value.) | Adjustment, setup, operation data output, check (display) | | Trouble | |
| | 3 | Used to check the misfeed position and the number of misfeed at that position.<br>(If the number of misfeed is considerably great, the machine must be repaired.)<br>(Sections other than DSPF sections) | Adjustment, setup, operation data output, check (display) | | Trouble | Misfeed |
| | 4 | Used to check the total trouble (self diag) history. | Adjustment, setup, operation data output, check (display) | | Trouble | |
| | 5 | Used to check the ROM version of each unit (section). | Other | | Software | |
| | 6 | Used to print the list of adjustments and setup data (simulations, FAX soft switches, counters). | Adjustment, setup, operation data output, check (print) | | Data | Setup, adjustment data |
| | 7 | Used to display the key operator code.<br>(Used when the customer has forgotten the key operator code.) | Adjustment, setup, operation data output, check (display) | | Data | User data |
| | 8 | Used to check the number of use of the staple, DSPF, and scanner (reading) unit. | Adjustment, setup, operation data output, check (display) | | Counter | |
| | 9 | Used to check the number of use (print quantity) of each paper feed section. | Adjustment, setup, operation data output, check (display) | Paper feed | Counter | |
| | 10 | Used to check the system configuration<br>(option, internal hardware). | Adjustment, setup, operation data output, check (display) | | Spec | Option |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 22 | 11 | Used to check the use frequency of FAX. (send/receive)<br>(Only when FAX is installed.) | Adjustment, setup, operation data output, check (display) | FAX | Data | |
| | 12 | Used to check the misfeed position and the number of misfeed at that position. (If the number of misfeed is considerably great, the machine must be repaired.) | Adjustment, setup, operation data output, check (display) | DSPF | Trouble | Misfeed |
| | 13 | Used to display the process cartridge data. | Adjustment, setup, operation data output, check (display) | | Counter | |
| | 19 | Used to display the scanner mode counter. | Adjustment, setup, operation data output, check (display) | | Counter | |
| 24 | 1 | Used to clear the misfeed counter, misfeed history, trouble counter, and trouble history. (After completion of maintenance, these counters must be cleared.) | Data clear | | Counter | |
| | 2 | Used to clear the number of use (print quantity) of each paper feed section. | Data clear | Paper feed | Counter | |
| | 3 | Used to clear the number of use of the staple, ADF, RADF, SPF, DSPF, and the scanner (reading) unit. | Data clear | | Counter | |
| | 4 | Used to reset the maintenance counter. | Data clear | | Counter | |
| | 5 | Used to reset the developer counter.<br>(The developer counter of the DV unit installed is reset.) | Data clear | Process (OPC drum, developing, transfer, cleaning) | Counter | Developer (DV unit) |
| | 6 | Used to reset the copy counter. | Data clear | | Counter | Copy |
| | 7 | Used to clear the OPC drum counter and the toner cartridge counter. (Perform when the OPC drum is replaced.) | Data clear | Process (OPC drum, developing, transfer, cleaning) | Counter | OPC drum |
| | 9 | Used to clear the printer print counter. (After completion of maintenance, this counter must be cleared.) | Data clear | Printer | Counter | Printer |
| | 10 | Used to clear the FAX counter. (After completion of maintenance, this counter must be cleared.)<br>(Only when FAX is installed.) | Data clear | FAX | Counter | |
| | 11 | Used to reset the drum rotation time, toner motor rotation time, and developer rotation time counters.<br>The developer counter of the DV unit installed is reset. | Data clear | Process (OPC drum, developing, transfer, cleaning) | Counter | Developer (DV unit) |
| | 15 | Used to clear each counter in the scanner mode. | Data clear | | Counter | |
| 25 | 1 | Used to check the operations of the main drive section (excluding the scanner (reading) section) and the toner density sensor. (The toner density sensor output can be monitored.) | Operation test, check | Drive | Operation | |
| | 2 | Used to initialize the toner density when replacing developer. (Auto adjustment) | Setup | Process (OPC drum, developing, transfer, cleaning) | | |
| 26 | 3 | Used to set the specification mode of the auditor. Setup must be made according to the use condition of the auditor. | Setup | Auditor | Spec | |
| | 5 | Used to set the count mode of the total counter and the maintenance counter. | Setup | | Spec | Counter |
| | 6 | Used to set the specification according to the destination. | Setup | | Spec | Destination |
| | 10 | Used to set the trial mode of the network scanner. | Setup | | Operation | |
| | 18 | Used to set Enable/Disable of toner save operation.<br>(This simulation is enabled only in Japan and UK versions. (Depends on SIM 26-6 (Destination) setup).<br>For the other destinations, user program P22 allows to make the similar setup.) | Setup | | Spec | Operation mode (Common operation) |
| | 30 | Used to set the operation mode conforming to the CE mark (Europe standards).<br>(For flickers when driving the fusing heater lamp.) | Setup | | Spec | Operation mode (Common operation) |
| | 35 | Used to set whether the trouble history of SIM 22-4 is displayed as one-time trouble or continuous troubles when two or more number of a same trouble occurred. | Setup | | Spec | |
| | 38 | Used to stop printing when developer life is expired. | Setup | Other | Operation | |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 26 | 41 | Used to set Enable/Disable of the magnification ratio auto selection function (AMS) in the pamphlet copy mode. | Setup | | Spec | Operation mode (Common operation) |
| | 52 | Used to set Enable/Disable of count-up when white paper is discharged. (White paper means the index paper (without copying) in the OHP index paper insertion mode, the front/rear covers (without copying) in the cover insertion mode, and white paper in the duplex exit mode (CA, etc.).) | Setup | Paper transport (Paper exit, switchback, transport) | | |
| 27 | 1 | Used to set the operation specifications when a communication trouble occurs between the host computer and MODEM (machine side). (When a communication trouble occurs between the host computer and MODEM (machine side), self diag display (U7-00) is displayed and setup is made to inhibit or allow printing. ) | Setup | Communication (RIC/MODEM) | Spec | Operation mode (Common operation) |
| | 5 | Used to enter the machine tag No. (This function allows to check the machine tag No. from the computer.) | Setup | Communication (RIC/MODEM) | Data | |
| 30 | 1 | Used to check the operations of the sensors and detectors in the paper feed, paper transport, and paper exit sections and their control circuits. | Operation test, check | | Operation | |
| | 2 | Used to check the operations of the sensors and detectors in the paper feed section and their control circuits. (The operations of the sensors and detectors in the paper feed section can be monitored on the LCD display.) | Operation test, check | Paper feed | Operation | |
| 40 | 1 | Used to check the operations of the manual paper feed tray paper size detectors and their control circuit. (The operations of the manual paper feed tray paper size detectors can be monitored on the LCD display.) | Operation test, check | Paper feed | Operation | |
| | 2 | Used to adjust the detection level of the manual paper feed tray paper width detector. | Adjustment | Paper feed | Operation | |
| | 7 | Used to enter the adjustment value of the manual paper feed tray width detection level. | Adjustment, setup | Paper feed | Operation | |
| | 11 | Used to check the width detection level of the multi purpose tray paper width detector. | Operation test, check | Paper feed | Operation | |
| | 12 | Used to adjust the width detection level of the multi purpose tray paper width detector. | Adjustment, setup | Paper feed | Operation | |
| 41 | 1 | Used to check the operations of the document size sensor and the related circuit. (The operation of the document size sensor can be monitored on the LCD display.) | Operation test, check | Other | Operation | |
| | 2 | Used to adjust the detection level of the document size sensor. | Adjustment | Other | Operation | |
| | 3 | Used to check the operations of the document size sensor and the related circuit. (The output level of the document size sensor can be monitored on the LCD display.) | Operation test, check | Other | Operation | |
| 43 | 1 | Used to set the fusing temperature in each operation mode. | Setup | Fusing, paper exit | | |
| 44 | 1 | Used to set Enable/Disable of each correction operation in the image forming (process) section. | Setup | Process (OPC drum, developing, transfer, cleaning) | Operation | |
| | 4 | Used to set the target image (reference) density level in the developing bias voltage correction. | Setup | Process (OPC drum, developing, transfer, cleaning) | Data | |
| | 9 | Used to check the result (main charger grid voltage developing bias voltage, laser power, etc.) of correction (process correction) in the image forming section. (By this simulation, the correction operation can be checked.) | Adjustment, setup, operation data output, check (display, print) | Process (OPC drum, developing, transfer, cleaning) | Data | Operation data (machine condition) |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 46 | 2 | Used to adjust the copy density in the copy mode (binary, auto, text, text/photo, photo mode). An adjustment with this simulation affects all the copy density adjustment values. | Adjustment | | Picture quality | Density |
| | 9 | Used to adjust the print density for each density level (display value) in the copy mode (binary-Text mode). A desired print density can be set for each density level (display value). | Adjustment | | Picture quality | Density |
| | 10 | Used to adjust the print density for each density level (display value) in the copy mode (binary-Text/Photo mode). A desired print density can be set for each density level (display value). | Adjustment | | Picture quality | Density |
| | 11 | Used to adjust the print density for each density level (display value) in the copy mode (binary-Photo mode). A desired print density can be set for each density level (display value). | Adjustment | | Picture quality | |
| | 12 | Used to adjust the print density in the FAX mode (all modes). An adjustment with this simulation affects all the copy density adjustment values. (Only when FAX is installed) | Adjustment | | Picture quality | |
| | 13 | Used to adjust the print density in the FAX mode (normal mode). (Only when FAX is installed.) | Adjustment | | Picture quality | |
| | 14 | Used to adjust the print density in the FAX mode (small text mode). (Only when FAX is installed.) | Adjustment | | Picture quality | |
| | 15 | Used to adjust the print density in the FAX mode (fine mode). (Only when FAX is installed.) | Adjustment | | Picture quality | |
| | 16 | Used to adjust the print density in the FAX mode (super-fine mode). (Only when FAX is installed.) | Adjustment | | Picture quality | |
| | 17 | Used to adjust the CCD/CIS shading reference value. | Setup, check | | Picture quality | |
| | 18 | Used to adjust gamma (density gradient) in each copy mode. | Adjustment | | Picture quality | Density |
| | 19 | Used to adjust gamma (density gradient) in the auto copy mode and to set the density detection area, and to set the image process mode. | Adjustment | | Picture quality | Density |
| | 20 | Used to adjust the copy density correction in the SPF/DSPF copy mode for the document table copy mode. This adjustment is made so that the copy density becomes the same as that in the document table copy mode. | Adjustment | | Picture quality | Density |
| | 21 | Used to adjust the scanner exposure level. (1 mode auto adjustment) | Adjustment, setup, operation data output, check (display) | Scanner (reading) | Picture quality | Density |
| | 22 | Used to adjust the scanner exposure level and to make individual setup. (Normal mode) | Adjustment, setup, operation data output, check (display) | Scanner (reading) | Picture quality | Density |
| | 23 | Used to adjust the scanner exposure level and to make individual setup. (Small text mode) | Adjustment, setup, operation data output, check (display) | Scanner (reading) | Picture quality | Density |
| | 24 | Used to adjust the scanner exposure level and to make individual setup. (Fine mode) | Adjustment, setup, operation data output, check (display) | Scanner (reading) | Picture quality | Density |
| | 25 | Used to adjust the scanner exposure level and to make individual setup. (Super fine mode) | Adjustment, setup, operation data output, check (display) | Scanner (reading) | Picture quality | Density |
| 48 | 1 | Used to adjust the copy magnification ratio (main scan direction, sub scan direction). | Adjustment | Scanner (reading) | Picture quality | |
| | 5 | Used to adjust the scan motor speed. | Adjustment | Scanner (reading) | Picture quality | |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 50 | 1 | Used to adjust the document scan position, the image print position, and the void area (image loss).(A similar adjustment can be made with SIM 50-2 (simple method).) | Adjustment | | Picture quality | Picture position |
| | 2 | Used to adjust the document scan position, the image print position, and the void area (image loss).(This simulation allows simple procedure of the similar adjustment to SIM 50-1.) | Adjustment | | Picture quality | Picture position |
| | 6 | Document scan position adjustment. (DSPF) | Adjustment | | Picture quality | |
| | 7 | Document scan position adjustment (Simple method) (DSPF) | Adjustment | | Picture quality | |
| | 10 | Used to adjust the print image center position. (Adjusted for each paper feed section.) | Adjustment | Image process (ICU) | Picture quality | Picture position |
| | 12 | Used to adjust the reading image center position. (Adjusted for each document mode.) | Adjustment | Image process (ICU) | Picture quality | Picture position |
| 51 | 2 | Used to adjust the contact pressure of paper on the resist roller in each section (machine paper feed, duplex paper feed, SPF paper feed). (This adjustment is required when the print image position varies or when paper jam occurs frequently.) | Adjustment | Paper transport (paper exit, switchback, transport) | Operation | |
| 53 | 6 | Used to adjust the DSPF width detection level. | Adjustment | | Operation | |
| | 7 | Used to enter the adjustment value of SPF width detection. | Adjustment, setup, operation data output, check (display, print) | SPF/ADF/RADF/UDH | Operation | |
| 60 | 1 | Used to check the ICU (DRAM) operation (read/write). (SIMM memory, Onboard memory) | Operation test, check | Image process (ICU) | Operation | |
| 61 | 1 | Used to check the operations of the LSU unit. | Operation test, check | | Operation | |
| | 2 | Used to adjust laser power (absolute value) in the copy mode. | Adjustment | | Operation | |
| | 3 | Used to adjust laser power (absolute value) in the FAX reception mode. (Only when FAX is installed.) | Adjustment | | Operation | |
| | 4 | Used to adjust laser power (absolute value) in the printer mode. | Adjustment | | Operation | |
| 62 | 2 | Used to check the hard disk operation (read/write). (Only for the model with the hard disk) (Partial check) | Operation test, check | Memory | Operation | |
| | 3 | Used to check the hard disk operation (read/write). (Only for the model with the hard disk) (All area check) | Operation test, check | Memory | Operation | |
| 63 | 1 | Used to check the shading correction result. (The shading correction data are displayed.) | Adjustment, setup, operation data output, check (display, print) | Scanner (exposure) | Operation | |
| | 2 | Used to execute shading. | Adjustment, setup, operation data output, check (display, print) | Scanner (exposure) | Operation | |
| | 7 | Used to adjust the white plate scan start position in shading white correction. | Adjustment | Scanner (exposure) | Operation | |
| 64 | 1 | Used to check the operations of the printer section (self printing). (The print pattern, paper feed mode, print mode, print quantity, density can be changed optionally.) | Operation test, check | Printer | Operation | |
| 65 | 1 | Used to adjust the touch panel (LCD display section) detecting position. | Adjustment | Operation (display, operation) | | |
| | 2 | Used to check the result of the touch panel (LCD display section) detecting position adjustment. (The coordinates are displayed.) | Adjustment, setup, operation data output, check (display, print) | Operation (display, operation) | | |

| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 66 | 1 | Used to set the FAX soft switch function. (Used to utilize the FAX soft switch function.) | Setup | Fax | | |
| | 2 | Used to set the FAX soft switch setup to the default. (Except for the adjustment values) | Data clear | Fax | Data | |
| | 3 | Used to check the operations of FAX PWB memory (read/write). (This adjustment is required when replacing the PWB with a new one.) | Operation test, check | Fax | Data | |
| | 4 | Used to check the operations of data signal output in the FAX data output mode. (Used to check the MODEM operation.) Send level 0dB (Max.) (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 5 | Used to check the operations of data signal output in the FAX data output mode. (Used to check the MODEM operation.)Signals are sent in the send level set with the soft switch. (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 6 | Used to print the confidential password. (Used when the confidential password is forgotten.) (Only when FAX is installed.) | User data output, check (display, print) | Fax | Data | |
| | 7 | Used to print the image memory data (memory send, receive). (Only when FAX is installed.) | User data output, check (display, print) | Fax | Data | |
| | 8 | Used to check the output operation of the FAX sound signals. (Sound output IC operation check) Send level 0dB (Max.) (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 9 | Used to check the output operation of the FAX sound signals. (Sound output IC operation check) (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 10 | Used to clear all data of image memory (memory send, receive). Confidential data are also cleared. (Only when FAX is installed.) | User data output, check (display, print) | Fax | Data | |
| | 11 | Used to check the output operation of FAX G3 mode 300BPS. (Used to check the MODEM operation.) Send level 0dB (Max.) (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 12 | Used to check the output operation of FAX G3 mode 300BPS. (Used to check the MODEM operation.) Signals are sent in the send level set with the soft switch. (Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 13 | Used to enter (set) the number for the FAX dial signal output test. (The dial number signal set with this simulation is outputted in the dial signal output test with SIM 66-14~16) (Only when FAX is installed.) | Setup | Fax | Data | |
| | 14 | Used to set the make time in the FAX pulse dial mode (10PPS) and to test the dial signal output. (The dial number signal set with SIM 66-13 is outputted.) Used to check dialing troubles and the operation. (Only when FAX is installed.) | Setup | Fax | Operation | |

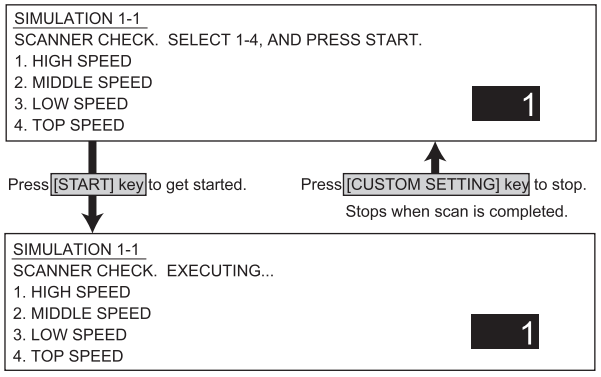
| Code | | Function (Content) | Purpose | Section | Item | |
|---|---|---|---|---|---|---|
| Main | Sub | | | | | |
| 66 | 15 | Used to set the make time in the FAX pulse dial mode (20PPS) and to test the dial signal output. (The dial number signal set with SIM 66-13 is outputted.) Used to check dialing troubles and the operation. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 16 | Used to test the dial signal (DTMF) output in the FAX tone dial mode. (The dial number signal set with SIM 66-13 is outputted.) The send level can be set to an optional level. Dialing troubles and operation.(Only when FAX is installed.) | Setup | Fax | Operation | |
| | 17 | Used to test the dial signal (DTMF) output in the Fax tone dial mode. Send level 0db (Max.).Used to check the operation. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 18 | Used to test the dial signal (DTMF) in the FAX tone dial mode. The send level set with the soft switch is outputted. Used to check the operation. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 19 | Used to backup the FAX SRAM data into the flash Memory(Option FAX memory:AR-MM9) (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 20 | Used to restore the backup data (SIM 66-19) to SRAM. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 21 | Used to print the FAX information (registrations, communication management, file management, system errors). (Only when FAX is installed.) | Adjustment, setup, operation data output, check (display, print) | Fax | Data | |
| | 22 | Used to adjust the handset sound volume. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 23 | Used to download the FAX program. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 24 | Used clear the FAST memory data. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 25 | Used to register the FAX number for MODEM dial-in. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 26 | Used to register the external telephone number for MODEM dial-in. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 27 | Used to register the voice-warp transfer number. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 28 | Used to record a sound message. (Only when FAX is installed.) | Inhibited | Fax | | |
| | 29 | Used to clear the telephone directory. (Only when FAX is installed.) | Setup | Fax | Operation | |
| | 30 | Used to check TEL/LIU status change. | Setup | Fax | Operation | |
| | 31 | Used to set the TEL/LIU status. | Setup | Fax | Operation | |
| | 32 | Used to check received data. | Inhibited | Fax | | |
| | 33 | Used to check signal detection. | Inhibited | Fax | | |
| | 34 | Used to measure and display the communication time. | Setup | Fax | Operation | |
| | 35 | Modem program rewriting.(Only when FAX is installed.) | Operation test, check | Fax | Operation | |
| | 36 | Used to check interface between MFPC and MDMC. Check is made in the data line or the command line. | Operation test, check | Fax | Operation | |
| 67 | 2 | Used to check the parallel I/F operation of the printer. (This simulation is made only in the production site and not in the market. It requires a special tool.) | Inhibited | Printer | | Interface, communi-cation |
| | 11 | Used to set Enable/Disable of the parallel I/F select signal of the printer. | Adjustment | Printer | Operation | Interface, communi-cation |
| | 16 | Used to check the operation of the network card. | Operation test, check | Printer | Operation | Interface, communi-cation |

# 5. Details of simulations

**Main code 1**

## 1-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the scanner (reading) unit and its control circuit. |
| Section | Scanner (reading) |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |

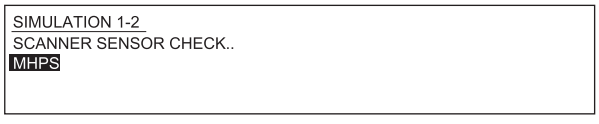



**<List of set values>**

| | | |
|---|---|---|
| 1 | High speed operation | 168mm / sec |
| 2 | Middle speed operation | 110mm / sec |
| 3 | Low speed operation | 55mm / sec |
| 4 | Top speed operation | 220mm / sec |

## 1-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the scanner (reading) unit and their control circuits. |
| Section | Scanner (reading) |
| Item | Operation |
| Operation/Procedure | The sensor display is highlighted when it is detected. |



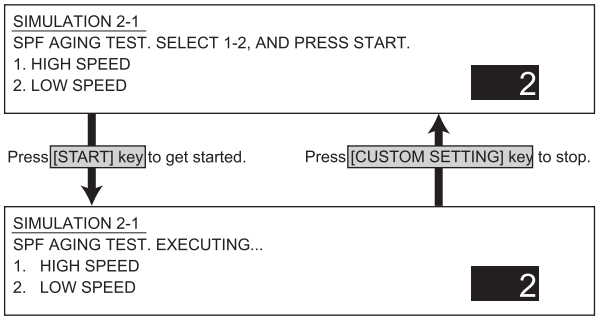

**<List of display value>**

| | |
|---|---|
| MHPS | Optical system home position |

**Main code 2**

## 2-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the automatic document feeder unit and its control circuit. |
| Section | DSPF |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |

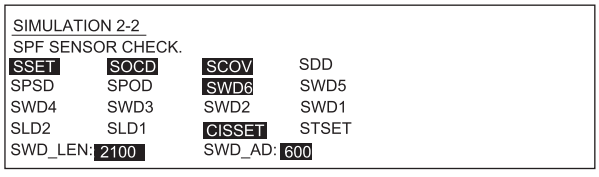



**<List of set values>**

| | |
|---|---|
| 1 | High speed operation |
| 2 | Low speed operation |

## 2-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the automatic document feeder unit and their control circuits. |
| Section | DSPF |
| Item | Operation |
| Operation/Procedure | The sensor display is highlighted when it is detected. |

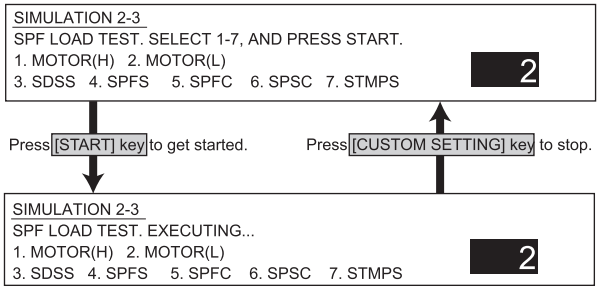



**<List of display values>**

| | |
|---|---|
| SSET | SPF sensor |
| SOCD | Open sensor |
| SCOV | Paper feed cover sensor |
| SDD | Document set sensor |
| SPSD | Document resist front sensor |
| SPCD | Document exit sensor |
| SWDn | Document width sensor (n → 1(Inside) ~6(Outside)) |
| SLDn | Document length sensor (n → 1(Inside) ~2(Outside)) |
| OSSET | OS installation sensor |
| STSET | Stamp unit installation sensor |
| SWD_LEN | SPF guide plate position (Unit: 0.1mm) |
| SWD_AD | SPF document width detection volume output AD value |

## 2-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation under load in the automatic document feeder unit and their control circuits. |
| Section | DSPF |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |


SIMULATION 2-3
SPF LOAD TEST. SELECT 1-7, AND PRESS START.
1. MOTOR(H) 2. MOTOR(L)
3. SDSS 4. SPFS 5. SPFC 6. SPSC 7. STMPS
2
Press [START] key to get started.
Press [CUSTOM SETTING] key to stop.
SIMULATION 2-3
SPF LOAD TEST. EXECUTING...
1. MOTOR(H) 2. MOTOR(L)
3. SDSS 4. SPFS 5. SPFC 6. SPSC 7. STMPS
2

**<List of set values>**

| | |
|---|---|
| 1 | Motor high speed rotation |
| 2 | Motor low speed rotation |
| 3 | Document stopper solenoid |
| 4 | Document feed solenoid |
| 5 | Document feed clutch |
| 6 | Document resist clutch |
| 7 | Stamp solenoid |

**Main code 3**

## 3-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the finisher and their control circuits. |
| Section | Finisher |
| Item | Operation |
| Operation/Procedure | The display is highlighted when detected. |

Finisher (AR-FN6)

SIMULATION 3-2
FINISHER SENSOR CHECK.

| | | | |
|---|---|---|---|
| PID | SCID | SCID2 | PPD |
| SCPD | POD | T1PF | T2UP |
| T2DN | T2PD | STSP | STLS |
| STNC | STHP | JFHP | JRHP |
| PSHP | STUHP | XXXX | STTHP1 |
| STTHP2 | DOPD | DSW1 | DSW2 |
| 24VM | MMLK | | |

Console finisher (AR-FN7)

SIMULATION 3-2
FINISHER SENSOR CHECK.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FSSS | FJS | FFDSW | FTCS | FFDS | | | |
| FSPS | FSUC | FSS | FSTHPS | FSHPS | FLE | FLLLS | |
| FULS | FFE | FFES | FFRHPS | FFHPS | FFPS | FSLS | |
| FBES | FOBHPS | FAS | FRJHPS | FFJHPS | FARHPS | FPHPS | |
| FES | | | | | | | |
| (FPE) | (FPSHPS) | (FPUC) | (FPDS) | (FPDSS4) | (FPDSS3) | (FPDSS2) | |
| (FPDSS1) | (FPTS) | Devices in ( ) are added when the punch unit is installed. | | | | | |

**<List of display values>**

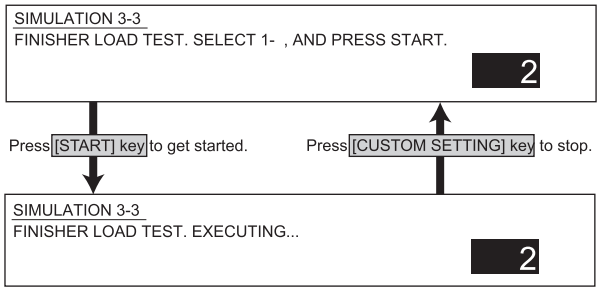
| Finisher | | Console finisher | |
|---|---|---|---|
| STHP | Stapler HP detection | FSSS | Stapler safety switch |
| POD | Tray 2 paper exit detection | FJS | Joint switch |
| SCID | Staple compiler paper entry detection | FFDSW | Front door switch |
| PID | Paper entry detection | FTCS | Upper cover sensor |
| T2PD | Tray 2 paper empty detection | FFDS | Front door sensor |
| T2DN | Tray 2 lower limit detection | FSPS | Self prime sensor |
| T2UP | Tray 2 upper limit detection | FSUC | Stapler connection detection |
| JRHP | Jogger R HP | FSS | Staple sensor |
| JFHP | Jogger (F) HP | FSTHPS | Stapler HP sensor |
| SCID2 | Staple compiler paper entry detection 2 | FSHPS | Slide HP sensor |
| STTHP2 | Staple rotation HP detection 2 | FLE | Lift lock sensor |
| STTHP1 | Staple rotation HP detection 1 | FLLLS | Lift lower limit sensor |
| STUHP | Staple shift HP detection | FULS | Lift upper limit sensor |
| PSHP | Pusher HP detection | FFE | Bookbinding clock sensor |
| PPD | Paper hold return detection | FFES | Bookbinding paper sensor |
| DSW2 | Staple replacement door open detection | FFRHPS | Bookbinding roller HP sensor |
| DSW1 | Compiler jam cancel door open detection | FFHPS | Bookbinding HP sensor |
| 24VM | 24V power supply | FFPS | Bookbinding position sensor |
| T1PF | Tray 1 full detection | FSLS | Paper surface sensor |
| STSP | Stapling ready detection | FBES | Tray paper sensor |
| STLS | Cartridge inside spare staple empty detection | FOBHPS | Paper exit belt HP sensor |
| STNC | Cartridge empty detection | FAS | Alignment tray sensor |
| DOPD | Interface unit door open detection | FRJHPS | Alignment HP sensor R |
| MMLK | Main drive motor lock detection | FFJHPS | Alignment HP sensor F |
| SCPD | Staple compiler paper empty detection | FARHPS | Bundle roller HP sensor |
| | | FPHPS | Paddle HP sensor |
| | | FES | Entry port sensor |

•The following units are added when the punch unit is installed to the console finisher:

| | |
|---|---|
| FPE | Punch motor encoder |
| FPSHPS | Punch side register HP |
| FPUC | Punch connection detection |
| FPDS | Punch dust sensor |
| FPDSS4 | Punch side register sensor 4 |
| FPDSS3 | Punch side register sensor 3 |
| FPDSS2 | Punch side register sensor 2 |
| FPDSS1 | Punch side register sensor 1 |
| FPTS | Punch timing sensor |

## 3-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation under load in the finisher and their control circuits. |
| Section | Finisher |
| Item | Operation |
| Operation/Procedure | The display is highlighted when detected. |

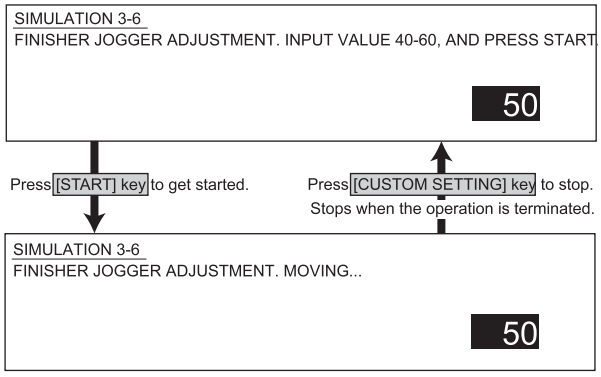



**<List of display values>**

| Finisher | | | Console finisher | | |
|---|---|---|---|---|---|
| 1 | T2S | Tray 2 solenoid | 1 | FFC | Folding clutch |
| 2 | T2OM | Paper exit motor | 2 | FPSM | Puncher side register motor |
| 3 | SPS | Stopper solenoid | 3 | FPNM | Punch motor |
| 4 | SCRS | Roller pressure release solenoid | 4 | FLM | Shift motor |
| 5 | PPS | Rear edge h folding solenoid | 5 | FFSM | Stapler motor |
| 6 | SCGS | Compiler gate solenoid | 6 | FSM | Slide motor |
| 7 | STTM | Staple rotation motor | 7 | FRJM | Alignment motor R |
| 8 | STUM | Stapler shift motor | 8 | FFJM | Alignment motor F |
| 9 | MM | Main drive motor | 9 | FAM | Bundle exit motor |
| 10 | EVM | Elevator motor | 10 | FPM | Paddle motor |
| 11 | STM | Staple motor | 11 | FFM | Transport motor |
| 12 | JRM | Jogger motor rear | | | |
| 13 | JFM | Jogger motor front | | | |
| 14 | PSM | Pusher motor | | | |

## 3-6

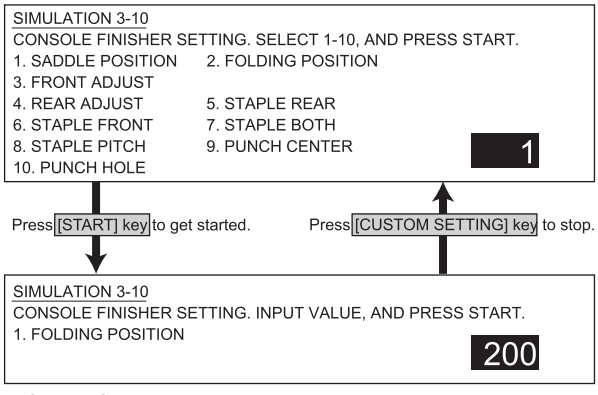
| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the stacking capacity of the finisher (AR-FN6). (Used to adjust the alignment plate (jogger) stop position in the finisher paper width direction. The adjustment is made by changing the alignment plate home position in the paper width direction by software. ) |
| Section | Finisher |
| Item | Operation |
| Operation/Procedure | Enter the adjustment value with 10 digit key pad and press START key. The jogger moves to LT position (Inch series) or A4 position (AB series) according to the entered value, and stops there. |


SIMULATION 3-6
FINISHER JOGGER ADJUSTMENT. INPUT VALUE 40-60, AND PRESS START.
50
Press [START] key to get started.
Press [CUSTOM SETTING] key to stop.
Stops when the operation is terminated.
SIMULATION 3-6
FINISHER JOGGER ADJUSTMENT. MOVING...
50

(Stored on PCU PWB)

## 3-10

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the console finisher (AR-FN7). |
| Section | Finisher |
| Item | Operation |
| Operation/Procedure | Setting of the console finisher is performed. |




**<List of set values>**

| | Adjustment content | Range | Initial value | 1STEP |
|---|---|---|---|---|
| 1 | Saddle binding position adjustment | 0~400 | 200 | 0.0707mm |
| 2 | Saddle folding position adjustment | 0~400 | 200 | 0.0525mm |
| 3 | Front alignment position adjustment | 0~20 | 10 | 0.367mm |
| 4 | Rear alignment position adjustment | 0~20 | 10 | 0.367mm |
| 5 | Staple rear one-position binding position adjustment | 0~200 | 100 | 0.04374mm |
| 6 | Staple front one-position binding position adjustment | 0~200 | 100 | 0.04374mm |
| 7 | Staple 2-position binding center adjustment | 0~200 | 100 | 0.04374mm |
| 8 | Staple 2-position binding pitch adjustment | 0~99 | 50 | 0.04374mm |
| 9 | Punch center adjustment (Slide direction) | 47~53 | 50 | 1mm |
| 10 | Punch hole position adjustment (Paper feed direction) | 0~99 | 50 | 0.105mm |

(Values stored in EEPROM)

## 3-20

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the mail bin stacker (AR-MS1) sensor. |
| Section | Mail bin stacker |
| Item | Operation |
| Operation/Procedure | The display is highlighted when detected. |

```
SIMULATION 3-20
MAIL BOX SENSOR CHECK.
MPFD1  MPFD2  MPFD3  MPFD4  MPFD5  MPFD6  MPFD7
MPFD8  MPID   MPPD1  MPPD2  MPPD3  MPPD4  MPPD5
M24VM  MDD1   MDOPD
```

**<List of display values>**

| | | | |
|---|---|---|---|
| MPFD1 | Tray 1 paper full detection | MPPD1 | Paper transport sensor 1 |
| MPFD2 | Tray 2 paper full detection | MPPD2 | Paper transport sensor 2 |
| MPFD3 | Tray 3 paper full detection | MPPD3 | Paper transport sensor 3 |
| MPFD4 | Tray 4 paper full detection | MPPD4 | Paper transport sensor 4 |
| MPFD5 | Tray 5 paper full detection | MPPD5 | Paper transport sensor 5 |
| MPFD6 | Tray 6 paper full detection | M24VM | 24V power supply |
| MPFD7 | Tray 7 paper full detection | MDD1 | Jam cancel door |
| MPFD8 | Tray 8 paper full detection | MDOPD | Interface unit door |
| MPID | Interface unit paper entry detection | | |

## 3-21

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the mail bin stacker loads. |
| Section | Mail bin stacker |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |

```
SIMULATION 3-21
MAIL BOX LOAD TEST. SELECT 1-8, AND PRESS START.
1.MM
2.GSOL1                                  2
3.GSOL2
4.GSOL3
5.GSOL4
6.GSOL5
7.GSOL6
8.GSOL7
```

Press [START] key to get started. Press [CUSTOM SETTING] key to stop.

```
SIMULATION 3-21
MAIL BOX LOAD TEST. EXECUTING...
1.MM
2.GSOL1                                  2
3.GSOL2
4.GSOL3
5.GSOL4
6.GSOL5
7.GSOL6
8.GSOL7
```

**<List of set values>**

| | |
|---|---|
| 1 | Main motor |
| 2 | Gate solenoid 1 |
| 3 | Gate solenoid 2 |
| 4 | Gate solenoid 3 |
| 5 | Gate solenoid 4 |
| 6 | Gate solenoid 5 |
| 7 | Gate solenoid 6 |
| 8 | Gate solenoid 7 |

**Main code 4**

## 4-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the paper feed section (desk paper feed/large capacity trays) and their control circuits. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The display is highlighted when detected. |

(3-tray desk)

```
SIMULATION 4-2
DESK  SENSOR CHECK.
DDRS    DPFD1   DPFD2   DPFD3
MCLUD   DLUD1   DLUD2   MCSPD
DSPD1   DSPD2   MCPED   DPED1
DPED2   MCSS1   MCSS2   MCSS3
MCSS4   DCSS11  DCSS12  DCSS13
DCSS14  XXXXXX  DCSS21  DCSS22
DCSS23  DCSS24  XXXXXX
```

(LCC)

```
SIMULATION 4-2
LCC SENSOR CHECK.
TDRS    TTSD    TPFD1   TPFD2
TPFD3   MCLUD   TLUD1   TLUD2
MCSPD   TSPD1   TSPD2   MCPED
TPED1   TPED2   MCSS1   MCSS2
MCSS3   MCSS4
```

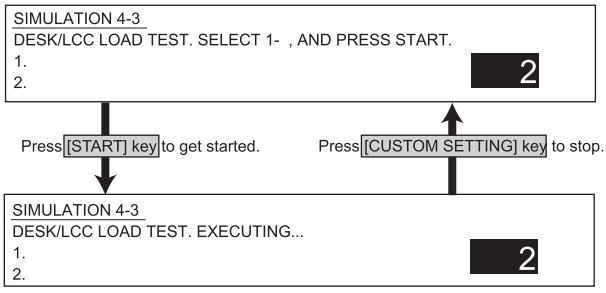
**<List of display values>**

| 3-tray desk | | LCC | |
|---|---|---|---|
| DDRS | Desk door sensor | TDRS | Tandem side door sensor |
| DSPD2 | Desk cassette 2 remaining paper quantity sensor | TTSD | Tandem tray sensor |
| DSPD1 | Desk cassette 1 remaining paper quantity sensor | TLUD2 | Tandem tray 2 upper limit sensor |
| DCSS24 | Desk cassette 2 paper rear edge sensor 4 | TLUD1 | Tandem tray 1 upper limit sensor |
| DCSS23 | Desk cassette 2 paper rear edge sensor 3 | TSPD2 | Tandem tray 2 remaining quantity sensor |
| DCSS22 | Desk cassette 2 paper rear edge sensor 2 | TSPD1 | Tandem tray 1 remaining quantity sensor |
| DCSS21 | Desk cassette 2 paper rear edge sensor 1 | TPED2 | Tandem tray 2 paper sensor |
| DLUD2 | Desk cassette 2 upper limit sensor | TPED1 | Tandem tray 1 paper sensors |
| DPED2 | Desk cassette 2 paper sensor | TPFD3 | Tandem paper transport sensor 3 |
| DPFD3 | Desk paper transport sensor 3 | TPFD2 | Tandem paper transport sensor 2 |
| DCSS14 | Desk cassette 1 paper rear edge sensor 4 | MCSS4 | MP tray size detection 4 |
| DCSS13 | Desk cassette 1 paper rear edge sensor 3 | MCSS3 | MP tray size detection 3 |
| DCSS12 | Desk cassette 1 paper rear edge sensor 2 | MCSS2 | MP tray size detection 23 |
| DCSS11 | Desk cassette 1 paper rear edge sensor 1 | MCSS1 | MP tray size detection 1 |
| DLUD1 | Desk cassette 1 upper limit sensor | MCSPD | MP tray remaining quantity detection |
| DPED1 | Desk cassette 1 paper sensor | MCLUD | MP tray upper limit detection |
| DPFD2 | Desk paper transport sensor 2 | MCPED | MP tray paper empty detection |
| MCSS4 | MP tray size detection 4 | TPFD1 | MP tray transport detection |

| 3-tray desk | | LCC | |
|---|---|---|---|
| MCSS3 | MP tray size detection 3 | | |
| MCSS2 | MP tray size detection 2 | | |
| MCSS1 | MP tray size detection 1 | | |
| MCSPD | MP tray remaining quantity detection | | |
| MCLUD | MP tray upper limit detection | | |
| MCPED | MP tray paper empty detection | | |
| DPFD1 | MP tray transport detection | | |

## 4-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation under load in the paper feed section (desk paper feed/large capacity trays) and their control circuits. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |




**<List of set values>**

| 3-tray desk | | | LCC | | |
|---|---|---|---|---|---|
| 1 | DLUM2 | Desk lift-up motor 2 | 1 | TLUM2 | LCC lift-up motor 2 |
| 2 | DLUM1 | Desk lift-up motor 1 | 2 | TLUM1 | LCC lift-up motor 1 |
| 3 | MCLUM | Desk multi lift-up motor | 3 | MCLUM | LCC multi lift-up motor |
| 4 | DPFCL | Desk paper transport clutch | 4 | TPFCL | LCC transport clutch |
| 5 | DPCL2 | Desk paper feed clutch 2 | 5 | TPCL2 | LCC paper feed clutch 2 |
| 6 | DPCL1 | Desk paper feed clutch 1 | 6 | TPCL1 | LCC paper feed clutch 1 |
| 7 | MCPCL | Desk multi paper feed clutch | 7 | MCPCL | LCC multi paper feed clutch |
| 8 | DMM | Desk transport motor | 8 | TMM | LCC transport motor |

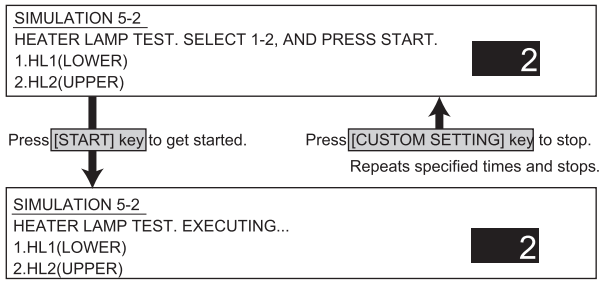
**Main code 5**

## 5-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the lamps and LCD on the operation panel and their control circuits. |
| Section | Operation (display, operation) |
| Item | Operation |
| Operation/Procedure | All LEDs are ON. The LCD contrast changes Max/Min every 2sec. |

## 5-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the heater lamp and its control circuit. |
| Section | Fusing |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. The lamp repeat ON/OFF every 500ms 5 times. |



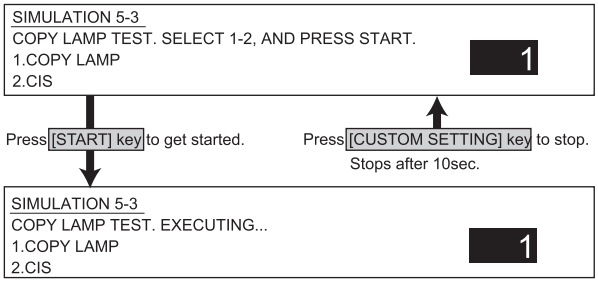

**<List of set values>**

| | |
|---|---|
| 1 | Heater lamp 1 (Lower) |
| 2 | Heater lamp 2 (Upper) |

## 5-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the copy lamp and its control circuit. |
| Section | Scanner (reading), DSPF (reading) |
| Item | Operation |
| Operation/Procedure | The copy lamp or CIS is lighted for 10sec and turned off. |

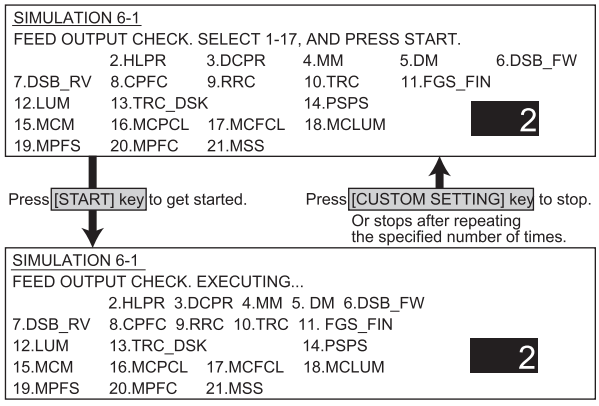
* CIS is displayed only when DSPF is installed.




**Main code 6**

## 6-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation under load (clutches and solenoids) in the paper transport system and their control circuits. |
| Section | Paper transport (paper exit, switchback, transport) |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |


SIMULATION 6-1
FEED OUTPUT CHECK. SELECT 1-17, AND PRESS START.
2.HLPR 3.DCPR 4.MM 5.DM 6.DSB_FW
7.DSB_RV 8.CPFC 9.RRC 10.TRC 11.FGS_FIN
12.LUM 13.TRC_DSK 14.PSPS
15.MCM 16.MCPCL 17.MCFCL 18.MCLUM
19.MPFS 20.MPFC 21.MSS
2
Press [START] key to get started.
Press [CUSTOM SETTING] key to stop.
Or stops after repeating the specified number of times.
SIMULATION 6-1
FEED OUTPUT CHECK. EXECUTING...
2.HLPR 3.DCPR 4.MM 5. DM 6.DSB_FW
7.DSB_RV 8.CPFC 9.RRC 10.TRC 11. FGS_FIN
12.LUM 13.TRC_DSK 14.PSPS
15.MCM 16.MCPCL 17.MCFCL 18.MCLUM
19.MPFS 20.MPFC 21.MSS
2

**<List of set values>**

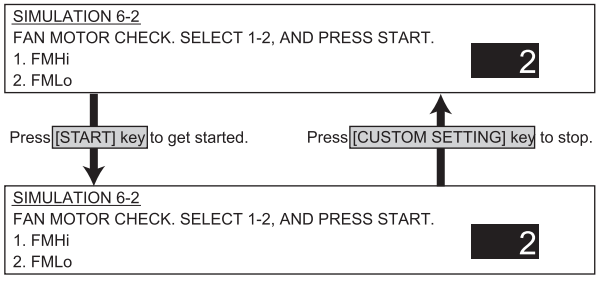
| | |
|---|---|
| 2 | HLPR (Heater power relay) |
| 3 | DCPR (DC power relay) |
| 4 | MM (Main motor) |
| 5 | DM (Drum motor) |
| 6 | DSB_FW (Stepping motor forward rotation) |
| 7 | DSB_RV (Stepping motor reverse rotation) |
| 8 | CPFC (Paper feed clutch) |
| 9 | RRC (Resist roller clutch) |
| 10 | TRC (Transport roller clutch) |
| 11 | FGS_FIN (Finisher gate solenoid) |
| 12 | LUM (Tray 1 lift-up motor) |
| 13 | TRC_DSK (Desk clutch sync signal) |
| 14 | PSPS (Separation pawl solenoid) |
| 15*1 | MCM(MP drive motor control signal) |
| 16*1 | MCPCL(MP tray paper feed clutch signal) |
| 17*1 | MCFCL(MP tray transport clutch signal) |
| 18*1 | MCLUM(MP tray lift-up motor signal) |
| 19*2 | MPFS (Manual paper feed solenoid signal) |
| 20*2 | MPFC (Manual paper feed clutch signal) |
| 21*2 | MSS (Manual paper feed gate solenoid) |

*1 Displayed when OPTION of multi-purpose only.

*2 Displayed when manual feed OPTION is added.

## 6-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of each fan motor and its control circuit. |
| Section | Others |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |



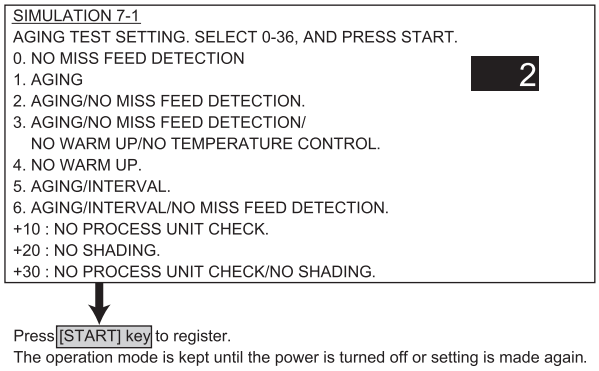

**<List of set values>**

| | |
|---|---|
| 1 | Fan motor high speed |
| 2 | Fan motor low speed |

**Main code 7**

## 7-1

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the aging conditions. |
| Section | |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |

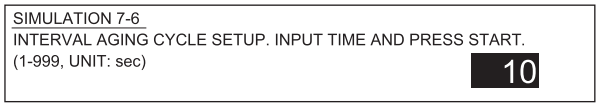

SIMULATION 7-1
AGING TEST SETTING. SELECT 0-36, AND PRESS START.
0. NO MISS FEED DETECTION
1. AGING
2. AGING/NO MISS FEED DETECTION.
3. AGING/NO MISS FEED DETECTION/
NO WARM UP/NO TEMPERATURE CONTROL.
4. NO WARM UP.
5. AGING/INTERVAL.
6. AGING/INTERVAL/NO MISS FEED DETECTION.
+10 : NO PROCESS UNIT CHECK.
+20 : NO SHADING.
+30 : NO PROCESS UNIT CHECK/NO SHADING.
2
Press [START] key to register.
The operation mode is kept until the power is turned off or setting is made again.

**<List of set values>**

| | |
|---|---|
| 0 | No jam detection |
| 1 | Aging mode |
| 2 | Aging mode without jam detection |
| 3 | Aging mode without jam/without warm-up/without fusing temperature control |
| 4 | Without warm-up |
| 5 | Intermittent aging mode |
| 6 | Intermittent aging mode without jam detection |
| Above +10 | No process unit (including developing unit) detection |
| Above +20 | No shading |
| Above +30 | No process unit detection/No shading |

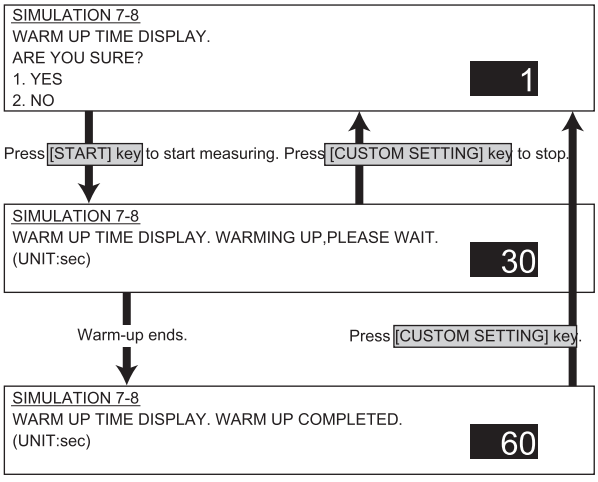
## 7-6

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the intermittent aging cycle. |
| Section | |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. Used to set the intermittent aging cycle of Sim 7-1. |



## 7-8

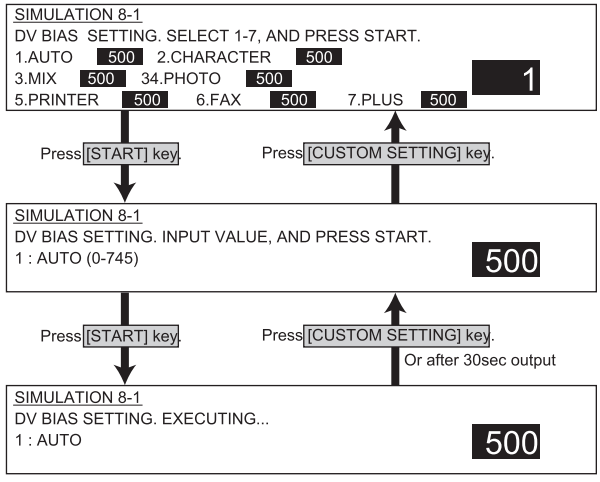
| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set Enable/Disable of warm-up time display. |
| Section | |
| Item | Operation |
| Operation/Procedure | The warm-up time is displayed in the unit of second. |




**Main code 8**

## 8-1

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to check and adjust the developing bias voltage in each print mode and its control circuit. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | |
| Operation/Procedure | Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item.<br>After entering the value press START key.<br>10 digit key padThe output is made for 30sec at the set value.<br>Then the output is stopped. |

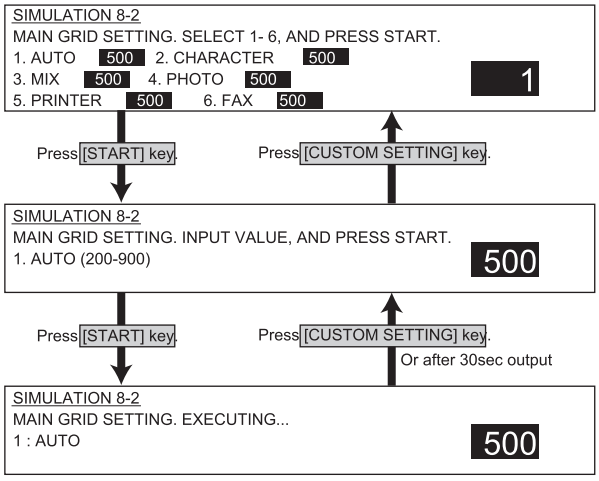



**<List of set values>**

| | | Default | Set range |
|---|---|---|---|
| 1 | Auto mode | 485 | 0 ~745 |
| 2 | Text mode | | |
| 3 | Text/Photo mode | | |
| 4 | Photo mode | | |
| 5 | Printer mode | | |
| 6 | Fax mode | | |
| 7 | Reverse developing bias voltage | 150 | 0 ~255 |

## 8-2

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to check and adjust the main charger grid voltage in each print mode and its control circuit. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | |
| Operation/Procedure | Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item.<br>After entering the value with 10 digit key pad, press START key.<br>The output is made for 30sec at the set value.<br>Then the output is stopped. |

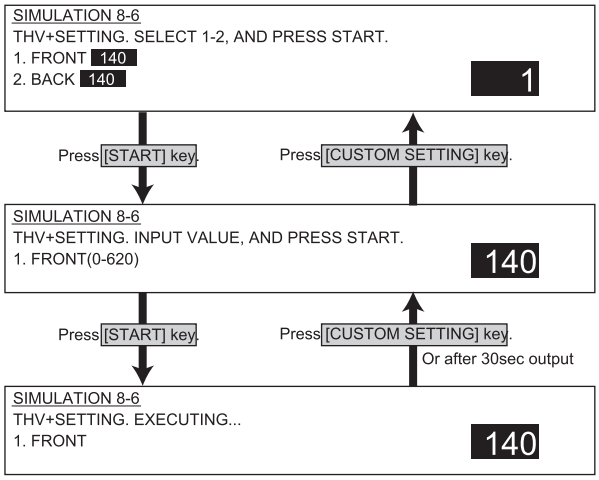



**<List of set values>**

| | | Default | Set range |
|---|---|---|---|
| 1 | Auto mode | 645 | 200 ~ 900 |
| 2 | Text mode | | |
| 3 | Text/Photo mode | | |
| 4 | Photo mode | | |
| 5 | Printer mode | | |
| 6 | Fax mode | | |

## 8-6

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to check and adjust the transfer charger current and its control circuit. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | |
| Operation/Procedure | Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item.<br>After entering the value with 10 digit key pad, press START key.<br>The output is made for 30sec at the set value.<br>Then the output is stopped. |

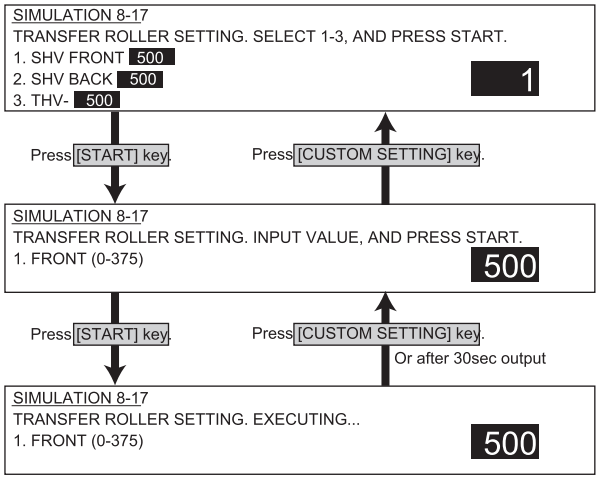



**<List of set values>**

| | | | Default | Set range |
|---|---|---|---|---|
| 1 | Cassette/manual paper feed | 45PPM | 267 | 0 ~ 620 |
| | | 35PPM | 220 | |
| 2 | Paper feed from ADU | 45PPM | 310 | |
| | | 35PPM | 267 | |

## 8-17

| Purpose | Operation test, check |
|---|---|
| Function (Content) | Used to set and check the transfer roller output. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Operation |
| Operation/Procedure | Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item.<br>After entering the value with 10 digit key pad, press START key.<br>The output is made for 30sec at the set value.<br>Then the output is stopped. |



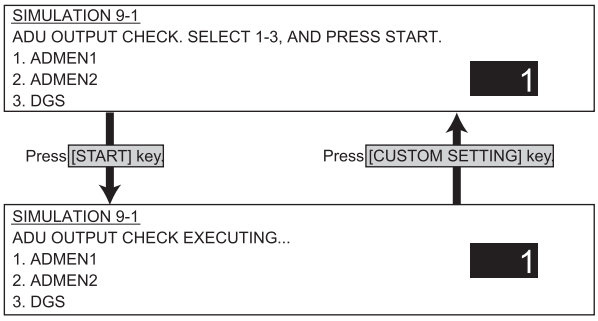

**<List of set values>**

| | | Default | Set range |
|---|---|---|---|
| 1 | SHV front surface | 160(45PPM)<br>120(35PPM) | 0 ~ 375 |
| 2 | SHV back surface | | |
| 3 | THV-output | 780 | 0 ~1250 |

**Main code 9**

## 9-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation under load (clutches and solenoids) in the duplex section and their control circuits. |
| Section | Duplex |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. |

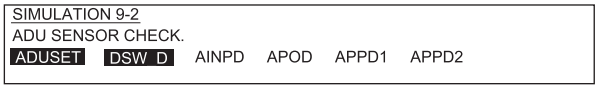



**<List of set values>**

| | |
|---|---|
| 1 | ADMEN1(ADU motor 1 control signal) |
| 2 | ADMEN2(ADU motor 2 control signal) |
| 3 | DGS(ADU gate solenoid) |

## 9-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the sensors and detectors in the duplex section and their control circuits. |
| Section | Duplex |
| Item | Operation |
| Operation/Procedure | The display is highlighted when detected. |



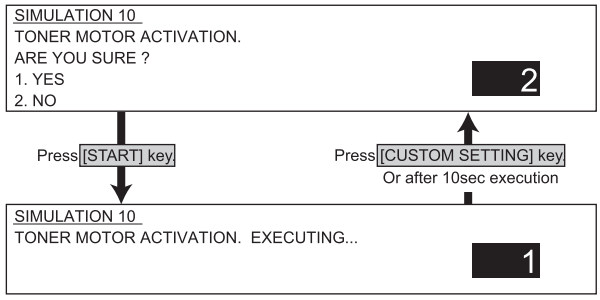

**<List of display values>**

| | |
|---|---|
| ADUSET | ADU installation detection |
| DSW_D | ADU cabinet open detection |
| AINPD | ADU paper entry detection |
| APOD | ADU paper exit detection |
| APPD1 | ADU paper detection 1 |
| APPD2 | ADU paper detection 2 |

**Main code 10**

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation of the toner motor and its control circuit. |
| Section | Process (OPC drum/developing/transfer/cleaning)/ Developing toner |
| Item | Operation |
| Operation/Procedure | Select with 10 digit key pad. The toner motor rotates for 10sec. |

Note: Never execute this simulation with toner in the toner hopper.
If executed, excessive toner will enter the developing section, causing an overtoner trouble. Be sure to remove the toner motor from the toner hopper before execution.

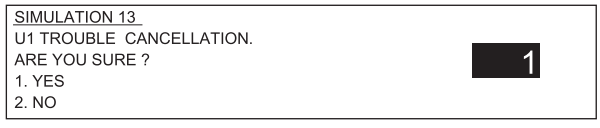



**<List of set values>**

| | |
|---|---|
| 1 | Toner motor rotation start |
| 2 | Cancel (The display returns to the main code entry menu.) |

**Main code 13**

| | |
|---|---|
| Purpose | Cancel (incase of a trouble) |
| Function (Content) | Used to cancel the self diag “U1” trouble. (Only when FAX is installed.) |
| Section | |
| Item | Trouble |
| Operation/Procedure | Select with 10 digit key pad. |

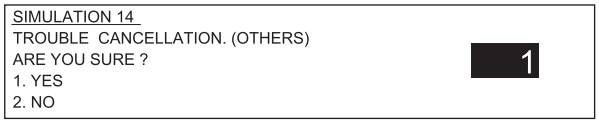



**<List of set values>**

| | |
|---|---|
| 1 | After canceling U1 trouble, the display returns to the main code entry menu. |
| 2 | Without canceling a trouble, the display returns to the main code entry menu. |

**Main code 14**

| | |
|---|---|
| Purpose | Cancel (in case of a trouble) |
| Function (Content) | Used to cancel the self diag U1/LCC/US/PF troubles. |
| Section | |
| Item | Trouble |
| Operation/Procedure | Select with 10 digit key pad |

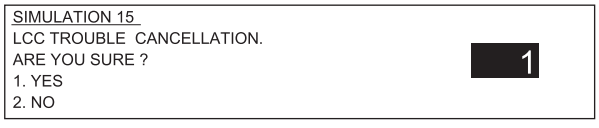



**<List of set values>**

| | |
|---|---|
| 1 | After canceling a trouble other than U1, U2, PF, and LCC, the display returns to the main code entry menu. |
| 2 | Without canceling a trouble, the display returns to the main code entry menu. |

**Main code 15**

| | |
|---|---|
| Purpose | Cancel (incase of a trouble) |
| Function (Content) | Used to cancel the self diag “U6 (09/20/21/22)” trouble. |
| Section | Paper feed |
| Item | Trouble |
| Operation/Procedure | Select with 10 digit key pad. |

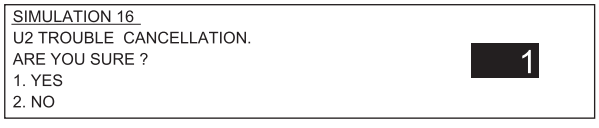



**<List of set values>**

| | |
|---|---|
| 1 | After canceling LCC trouble, the display returns to the main code entry menu. |
| 2 | Without canceling a trouble, the display returns to the main code entry menu. |

**Main code 16**

| | |
|---|---|
| Purpose | Cancel (incase of a trouble) |
| Function (Content) | Used to cancel the self diag “U2” trouble. |
| Section | |
| Item | Trouble |
| Operation/Procedure | Select with 10 digit key pad. |

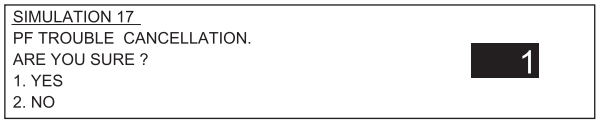



**<List of set values>**

| | |
|---|---|
| 1 | After canceling U2 trouble, the display returns to the main code entry menu. |
| 2 | Without canceling a trouble, the display returns to the main code entry menu. |

**Main code 17**

| | |
|---|---|
| Purpose | Cancel (incase of a trouble) |
| Function (Content) | Used to cancel the self diag “PF” trouble (when copy is inhibited by the host computer). |
| Section | Communication (RIC/MODEM) |
| Item | Trouble |
| Operation/Procedure | Select with 10 digit key pad. |



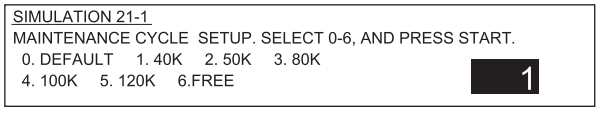

**<List of set values>**

| | |
|---|---|
| 1 | After canceling PF trouble, the display returns to the main code entry menu. |
| 2 | Without canceling a trouble, the display returns to the main code entry menu. |

**Main code 21**

**21-1**

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the maintenance cycle. |
| Section | |
| Item | Spec |
| Operation/Procedure | Used to set the maintenance cycle in an SRU machine. |




**<List of set values>**

| | |
|---|---|
| 0 | Maintenance display at the cycle of each control spec. |
| 1 | Maintenance display at 40K |
| 2 | Maintenance display at 50K |
| 3 | Maintenance display at 80K |
| 4 | Maintenance display at 100K |
| 5 | Maintenance display at 120K |
| 6 | No maintenance display |

**Main code 22**

## 22-1

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the print count in each section and in each operation mode.<br>(Used to check the maintenance timing.) |
| Section | |
| Item | Counter |
| Operation/Procedure | Data of each counter are displayed. |

```
SIMULATION 22-1
COUNTER DATA DISPLAY.
TOTAL :  ********      DRUM :  ********     TONER :  ********
DEVE :  ********       MAINTENANCE :  ********
TOTAL OUTPUT :  ********       COPIES :  ********
PRINTER :  ********      FAX OUTPUT :  ********
RIGHT SIDE :  ********       OTHERS :  ********
```

**<List of display values>**

| | |
|---|---|
| TOTAL | Total counter |
| DRUM | Drum cartridge counter |
| TONER | Toner cartridge counter |
| DEVE | Developer cartridge counter |
| MAINTENANCE | Maintenance counter |
| TOTAL OUTPUT | Total output quantity |
| COPIES | Copy effective paper counter |
| PRINTER | Printer counter |
| FAX | Fax print counter |
| RIIGHT SIDE OUTPUT | Right side paper exit counter |
| OTHERS | Other print counter (List print, etc.) |

## 22-2

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the number of total misfeed and troubles. (If the number of misfeed is considerably great, the machine must be repaired. The misfeed rate is obtained by dividing this count by the total counter value.) |
| Section | |
| Item | Trouble |
| Operation/Procedure | The numbers of times of paper jam, SPF jam, and troubles are displayed. |

```
SIMULATION 22-2
JAM/TROUBLE COUNTER DATA DISPLAY.
PAPER JAM :  ********       SPF JAM :  ********
TROUBLE :  ********
```

**<List of display values>**

| | |
|---|---|
| PAPER JAM | Number of times of paper jam |
| SPF JAM | Number of times of SPF jam |
| TROUBLE | Number of times of troubles |

## 22-3

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the misfeed position and the number of misfeed at that position.<br>(If the number of misfeed is considerably great, the machine must be repaired.)<br>(Sections other than DSPF sections) |
| Section | |
| Item | Trouble |
| Operation/Procedure | The history of the latest 50 paper jams is displayed. (Refer to the jam codes below.) |

```
SIMULATION 22-3
PAPER JAM HISTORY.
******** ******** ******** ******** ******** ******** ******** ******** ******** ********
******** ******** ******** ******** ******** ******** ******** ******** ******** ********
******** ******** ******** ******** ******** ******** ******** ******** ******** ********
******** ******** ******** ******** ******** ******** ******** ******** ******** ********
******** ******** ******** ******** ******** ******** ******** ******** ******** ********
.....
                                        (10 lines x 80 digits = 800 characters)
```

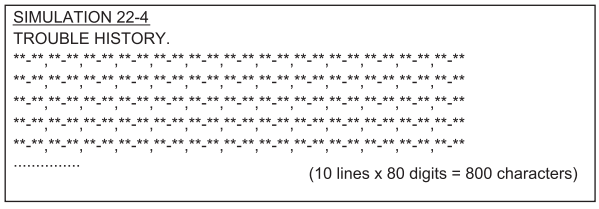
**<Jam codes>**

| Code | Description |
|---|---|
| TRAY2 | Tray 2 paper feed jam (MPFD not-reaching) |
| MPFDND1 | MPFD not-reaching jam (Desk tray 1 feed paper) |
| MPFDND2 | MPFD not-reaching jam (Desk tray 2 feed paper) |
| MPFDNTD | MPFD not-reaching jam (Tandem desk feed paper) |
| MPFDST2 | MPFD remaining jam (Machine tray 3 feed paper) |
| MPFDSD1 | MPFD remaining jam (Desk tray 1 feed paper) |
| MPFDSD2 | MPFD remaining jam (Desk tray 2 feed paper) |
| MPFDSTD | MPFD remaining jam (Tandem desk feed paper) |
| PPD1NMF | PPD1 not-reaching jam (Manual feed tray paper) |
| TRAY1 | Tray 1 feed paper jam (PPD1 not-reaching) |
| PPD1NT2 | PPD1 not-reaching jam (Machine tray 2 feed paper) |
| PPD1ND1 | PPD1 not-reaching jam (Desk tray 1 feed paper) |
| PPD1ND2 | PPD1 not-reaching jam (Desk tray 2 feed paper) |
| PPD1NTD | PPD1 not-reaching jam (Tandem desk feed paper) |
| PPD1NAD | PPD1 not-reaching jam (ADU refeed paper) |
| PPD1SMF | PPD1 remaining jam (Manual feed tray feed paper) |
| PPD1ST1 | PPD1 remaining jam (Machine tray 1 feed paper) |
| PPD1ST2 | PPD1 remaining jam (Machine tray 2 feed paper) |
| PPD1SD1 | PPD1 remaining jam (Desk tray 1 feed paper) |
| PPD1SD2 | PPD1 remaining jam (Desk tray 2 feed paper) |
| PPD1STD | PPD1 remaining jam (Tandem desk feed paper) |
| PPD1SAD | PPD1 remaining jam (ADU refeed paper) |
| PPD1PRI | PPD1 jam (Image ready is not supplied from ICU.) |
| POD1N | POD1 not-reaching jam |
| POD1S | POD1 remaining jam |
| POD2N | POD2 not-reaching jam |
| POD2SR | POD2 remaining jam<br>(When discharging to the right side of machine.) |
| POD2SL | POD2 remaining jam<br>(When discharging to the left side of machine.) |
| AINPDN | ADU paper entry sensor not-reaching jam |
| AINPDS | ADU paper entry sensor remaining jam |
| APODN | ADU paper exit sensor not-reaching jam |
| APODS | ADU paper exit sensor remaining jam |
| APPD1N | ADU transport sensor 1 not-reaching jam |
| APPD1S | ADU transport sensor 1 remaining jam |
| APPD2N | ADU transport sensor 2 not-reaching jam<br>(When ADU transport) |
| APPD2S | ADU transport sensor 2 remaining jam<br>(When ADU transport) |

| Code | Description |
|---|---|
| BPT | Manual feed tray paper feed jam (APPD2 not-reaching) |
| APPD2SM | ADU transport sensor 2 remaining jam<br>(Manual feed tray feed paper) |
| DESK2 | Desk tray 2 paper feed jam (DPFD3 not-reaching) |
| DPFD3SD2 | DPFD3 remaining jam (Desk tray 2 feed paper) |
| DESK1 | Desk tray 1 paper feed jam (DPFD2 not-reaching) |
| DPFD2ND2 | DPFD2 not-reaching jam (Desk tray 2 feed paper) |
| DPFD2SD1 | DPFD2 remaining jam (Desk tray 1 feed paper) |
| DPFD2SD2 | DPFD2 remaining jam (Desk tray 2 feed paper) |
| TTRAY2 | Tandem tray 2 paper feed jam (TPFD3 not-reaching) |
| TPFD3STD2 | TPFD3 remaining jam (Tandem tray 2 feed paper) |
| TTRAY1 | Tandem tray 1 paper feed jam (TPFD2 not-reaching) |
| TPFD2NTD2 | TPFD2 not-reaching jam (Tandem tray 2 feed paper) |
| TPFD2STD1 | TPFD2 remaining jam (Tandem tray 1 feed paper) |
| TPFD2STD2 | TPFD2 remaining jam (Tandem tray 2 feed paper) |
| FPID_N | Built-in finisher PID not-reaching jam |
| FPID_S | Built-in finisher PID remaining jam |
| FSCID_N | Built-in finisher SCID not-reaching jam |
| FSCID_S | Built-in finisher SCID remaining jam |
| FSCID2_N | Built-in finisher SCID2 not-reaching jam |
| FSCID2_S | Built-in finisher SCID2 remaining jam |
| FPPD_S | Built-in finisher PPD remaining jam |
| FSCPD_N | Built-in finisher SCPD not-reaching jam |
| FSCPD_S | Built-in finisher SCPD remaining jam |
| FPOD_N | Built-in finisher POD not-reaching jam |
| FPOD_S | Built-in finisher POD remaining jam |
| FES_N | Console finisher entry port sensor (FES) not-reaching jam |
| FES_S | Console finisher entry port sensor (FES) remaining jam |
| FFPS_N | Console finisher saddle not-reaching jam<br>(Not reaching the folding sensor (FFPS).) |
| FFPS_S | Console finisher saddle remaining jam<br>(The folding sensor (FFPS) does not turn off.) |
| FSTPL | Console finisher staple jam<br>(The stapler does not complete clinching.) |
| FPNCH | Console finisher punch jam<br>(The puncher does not complete punching.) |
| FDOP | Console finisher door open jam<br>(During/after paper passing, the front door, joint, or upper cover is opened.) |
| PID_N | mail bin PID not-reaching jam |
| PID_S | mail bin PID remaining jam |
| MPPD1_N | mail bin MPPD1 not-reaching jam |
| MPPD1_S | mail bin MPPD1 remaining jam |
| MPPD2_N | mail bin MPPD2 not-reaching jam |
| MPPD2_S | mail bin MPPD2 remaining jam |
| MPPD3_N | mail bin MPPD3 not-reaching jam |
| MPPD3_S | mail bin MPPD3 remaining jam |
| MPPD4_N | mail bin MPPD4 not-reaching jam |
| MPPD4_S | mail bin MPPD4 remaining jam |
| MPPD5_N | mail bin MPPD5 not-reaching jam |
| MPPD5_S | mail bin MPPD5 remaining jam |

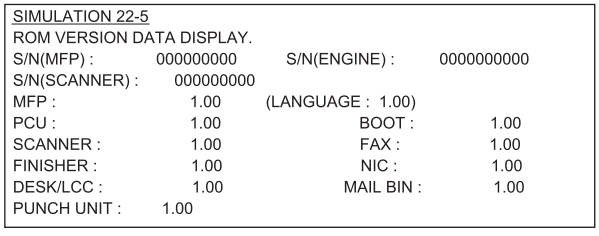
## 22-4

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the total trouble (self diag) history. |
| Section | |
| Item | Trouble |
| Operation/Procedure | The history of the latest 30 troubles is displayed. |




## 22-5

| | |
|---|---|
| Purpose | Other |
| Function (Content) | Used to check the ROM version of each unit (section). |
| Section | |
| Item | Software |
| Operation/Procedure | The version of each ROM is displayed. |


SIMULATION 22-5
ROM VERSION DATA DISPLAY.
S/N(MFP) : 000000000 S/N(ENGINE) : 0000000000
S/N(SCANNER) : 000000000
MFP : 1.00 (LANGUAGE : 1.00)
PCU : 1.00 BOOT : 1.00
SCANNER : 1.00 FAX : 1.00
FINISHER : 1.00 NIC : 1.00
DESK/LCC : 1.00 MAIL BIN : 1.00
PUNCH UNIT : 1.00

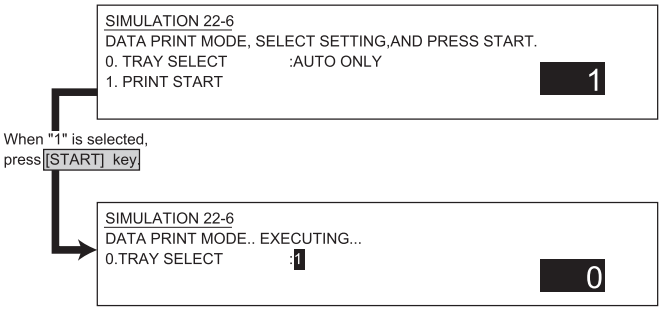
**<List of display values>**

| | |
|---|---|
| S/N(MFP) | Controller serial number |
| S/N(ENGINE) | Engine section serial number |
| S/N(SCANNER) | Scanner section serial number |
| MFP | MFP controller |
| (LANGUAGE) | (Language version) |
| BOOT | MFP controller boot ROM |
| FAX | FAX controller |
| NIC | Network card |
| PCU | PCU controller |
| SCANNER | Scanner controller |
| FINISHER | Finisher controller |
| DESK/LCC | Desk/LCC controller |
| MAIL BIN | mail bin controller |
| PUNCH UNIT | Punch unit |

(Product key controlled by PCU PWB serial number.)

## 22-6

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (print) |
| Function (Content) | Used to print the list of adjustments and setup data (simulations, FAX soft switches, counters). |
| Section | |
| Item | Data |
| Operation/Procedure | the selected data is displayed on the menu box. |




**<List of display values>**

| | |
|---|---|
| 0 | TRAY SELECT auto only (no selection) |
| 1 | PRINT START |

## 22-7

| | |
|---|---|
| Purpose | User data output, check (display) |
| Function (Content) | Used to display the key operator code. (Used when the customer has forgotten the key operator code.) |
| Section | |
| Item | Data |
| Operation/Procedure | The key operator code is displayed. |

## 22-8

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the number of times the staple, and scanner (reading) unit. |
| Section | |
| Item | Counter |
| Operation/Procedure | The counter data below are displayed. |

**<List of display value>**

| | |
|---|---|
| SPF | Number of times of document feed |
| SCAN | Number of times of scan |
| STAPLER | Number of times of stapling |
| PUNCH | Number of times of punching |
| STAMP | Number of times of SPF finish stamp |

## 22-9

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the number of times (print quantity) of each paper feed section. |
| Section | Paper feed |
| Item | Counter |
| Operation/Procedure | The counter data below are displayed. |

**<List of display values>**

| | |
|---|---|
| TRAY1 | Use quantity of tray 1 |
| TRAY2 | Use quantity of tray 2 (Multi purpose tray) |
| TRAY3 | Use quantity of tray 3/LCC left tray (Common to Desk/LCC) |
| TRAY4 | Use quantity of tray 4/LCC right tray (Desk/LCC) |
| BPT | Use quantity of manual feed tray |
| ADU | Use quantity of duplex paper feed |

## 22-10

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the system configuration (option, internal hardware). |
| Section | |
| Item | Spec |
| Operation/Procedure | The machine composition below is displayed. |

```
SIMULATION 22-10
SYSTEM INFORMATION.
MACHINE: *******
SPF: *******  XXXXXXXXXXX
FINISHER : *******          MAIL BIN : *******          PUNCH : ******
DESK/LCC : *******          ADU: *******  XXXXXXXXXXXX
PROCESS TYPE : *
SYSTEM MEMORY: **MB                  HDD: ***MB  ICU F ******
NIC : *******  NSCN : ******          PS3 : ******
FAX: *******  FAX  MEMORY : **MB      HAND SET: *******
STAMP : *******
```

**<List of display value>**

| | |
|---|---|
| MACHINE | AR-P350/350LP , AR-P450/450LP, AR-M350/350M, AR-M450/450M |
| SPF | NONE/ (Model code) |
| DSPF | NONE/ (Model code) |
| FINISHER | NONE/ (Model code) |
| MAIL BIN | NONE/ (Model code) |
| PUNCH | NONE/ (Model code) |
| DESK/LCC | NONE/ (Model code) |
| ADU | NONE/ (Model code) |
| SPEED | Machine speed 35/45 (CPM) |
| PROCESS TYPE | Process control spec (1, 2: AR machine 3: DM machine) |
| SYSTEM MEMORY | Memory capacity (MB) |
| HDD | Hard disk capacity (MB) |
| ICU | PRINTER/MFP |
| NIC | NONE/ (Model code) |
| NSCN | NONE/ (Network scanner) |
| PS3 | NONE/ (PS3 expansion kit) |
| FAX | NONE/ (Model code) |
| FAX MEMORY | FAX expansion memory capacity (MB) |
| HAND SET | NONE/ (Model code) |
| STAMP | Finisher stamp NONE/ (Model code) |

**<List of machine model codes>**

| Item | Display | Content |
|---|---|---|
| MACHINE | AR-P350/350LP | |
| | AR-P450/450LP | |
| | AR-M350/350M | |
| | AR-M450/450M | |
| SPF | - | Document feed unit not installed |
| | AR-EF2 | Document feed unit (SPF) installed |
| | AR-EF1 | Duplex document feed unit installed |
| FINISHER | - | After-work unit not installed |
| | AR-FN6 | Built-in finisher installed |
| | AR-FN7 | Console finisher installed |
| MAIL BIN | - | Mail bin not installed |
| | AR-MS1 | Mail bin installed |
| Punch unit | - | Punch unit not installed |
| | AR-PN1A | Punch unit 2 holes |
| | AR-PN1B | Punch unit 3 holes |
| | AR-PN1C | Punch unit 4 holes |
| | AR-PN1D | Punch unit 4 holes wide hole |
| ADU | - | Duplex module not installed |
| | AR-DU3 | Duplex module installed |
| | AR-DU4 | Duplex module + manual feed unit installed |
| DESK | - | Paper feed desk not installed |
| | AR-MU1 | Multi-purpose tray installed |
| | AR-D14 | Paper feed desk installed |
| | AR-D13 | Tandem desk installed |
| ICU | PRINTER | Printer board |
| | AR-M11 | MFP board |
| MEMORY | 0MB | No expansion memory |
| | ***MB | Expansion memory ***MB |
| HD | 0MB | Hard disk not installed |
| | ****MB | Hard disk installed (AR-HD3) |
| NIC | - | NIC not installed |
| | AR-NC5J | NIC installed |
| PS3 expansion kit | - | PS3 expansion kit not installed |
| | AR-PK1 | PS3 expansion kit installed |
| FAX | - | FAX expansion kit installed |
| | AR-FX5 | FAX expansion kit not installed |
| Network scanner | - | Network expansion kit not installed |
| | AR-NS2F | Network expansion kit installed |
| Expansion memory | - | Expansion memory for FAX not installed |
| | AR-MM9 | Expansion memory for FAX 8MB (AR-MM9) installed |
| Handset | - | handset not installed |
| | AR-HN5 | Handset installed |
| Finish stamp | - | Finish stamp unit not installed |
| | AR-SU1 | Finish stamp unit installed |

## 22-11

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the use frequency of FAX. (send/receive) (Only when FAX is installed.) |
| Section | FAX |
| Item | Data |
| Operation/Procedure | The counter data below are displayed. |

```
SIMULATION 22-11
FAX COUNTER DATA DISPLAY.
FAX SEND : ********      FAX RECEIVE : ********
FAX OUTPUT : ********
SEND IMAGES : ********      SEND TIME : ********:**:**
RECEIVE TIME : ********:**:**
```

**<List of display values>**

| | |
|---|---|
| FAX SEND | Number of times of FAX sending |
| FAX RECEIVE | Number of times of FAX receiving |
| FAX OUTPUT | FAX print quantity |
| SEND IMAGES | Quantity of sending |
| SEND TIME | Time for sending |
| RECEIVE TIME | Time for receiving |

## 22-12

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the misfeed position and the number of misfeed at that position. (If the number of misfeed is considerably great, the machine must be repaired.) |
| Section | DSPF |
| Item | Trouble |
| Operation/Procedure | The history of the latest 50 paper jams is displayed. (Refer to the jam code table below.) |

```
SIMULATION 22-12
SPF JAM HISTORY.
******* ******* ******* ******* ******* ******* ******* ******* ******* *******
******* ******* ******* ******* ******* ******* ******* ******* ******* *******
******* ******* ******* ******* ******* ******* ******* ******* ******* *******
******* ******* ******* ******* ******* ******* ******* ******* ******* *******
******* ******* ******* ******* ******* ******* ******* ******* ******* *******
.....                                   (10 lines x 80 digits = 800 characters)
```

**<Jam code table>**

| Code | Description |
|---|---|
| SPSD_N | SPSD not-reaching jam |
| SPSD_S | SPSD remaining jam |
| SPOD_N | SPOD not-reaching jam |
| SPOD_S | SPOD remaining jam |
| SPSDSCN | Exposure start timer end |

## 22-13

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to display the process cartridge data. |
| Section | |
| Item | Counter |
| Operation/Procedure | The counter data below are displayed. |

```
SIMULATION 22-13
PROCESS CARTRIDGE DATA DISPLAY.
DRUM : ********(counts)    **********(sec.)
TONER : ********(counts)  **********(sec.)
DEVE : *********(counts)    **********(sec.)
```

**<List of display values>**

| | | |
|---|---|---|
| DRUM | Drum cartridge counter | Count value (counts) |
| | | Rotating time (sec) |
| TONER | Toner cartridge counter | Count value (counts) |
| | | Rotating time (sec) |
| DEVE | Developer cartridge counter | Count value (counts) |
| | | Rotating time (sec) |

## 22-19

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to display the scanner mode counter. |
| Section | |
| Item | Counter |
| Operation/Procedure | The counter values related to the network scanner are displayed. |

```
SIMULATION 22-19
NETWORK SCANNER COUNTER DISPLAY.

 NETWORK SCANNER ORIGINAL COUNTER : *********
 MAIL COUNTER : ********
 FTP COUNTER : ********
```

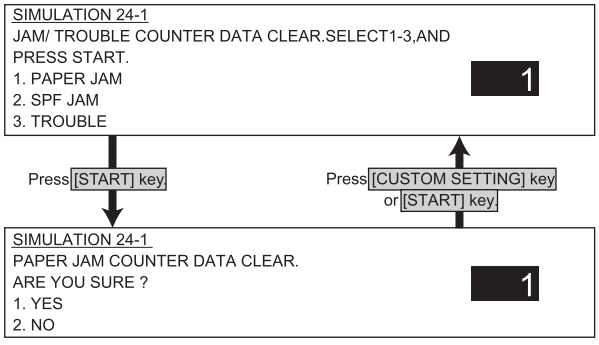
**<List of display values>**

| | |
|---|---|
| NETWORK SCANNER ORIGINAL COUNTER | Number of scanned documents (total of OC and SPF) |
| MAIL COUNTER | Number of times of mail sending |
| FTP COUNTER | Number of times of FTP sending |

**Main code 24**

## 24-1

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the misfeed counter, misfeed history, trouble counter, and trouble history. (After completion of maintenance, these counters must be cleared.) |
| Section | |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

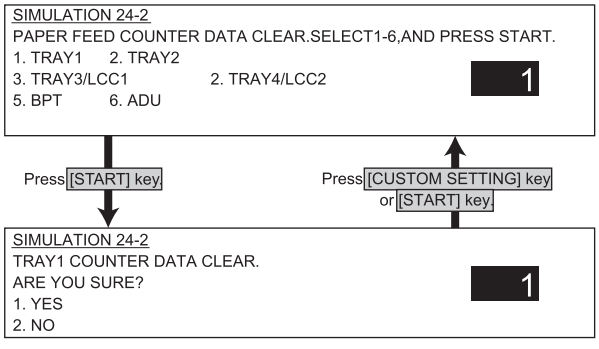



**<List of set values>**

| | |
|---|---|
| PAPER JAM | Number of times of paper jam |
| SPF JAM | Number of times of SPF jam |
| TROUBLE | Number of times of troubles |

## 24-2

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the number of use (print quantity) of each paper feed section. |
| Section | Paper feed |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

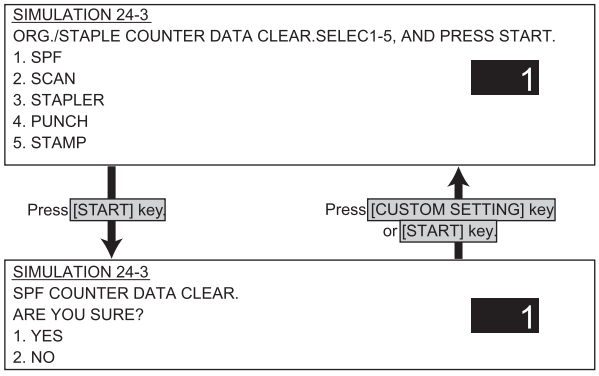



**<List of set values>**

| | |
|---|---|
| 1 | Tray 1 use quantity |
| 2 | Tray 2 use quantity |
| 3 | Tray 3/LCC left tray use quantity |
| 4 | Tray 4/LCC right tray use quantity |
| 5 | Manual feed tray use quantity |
| 6 | Duplex paper feed use quantity |

## 24-3

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the number of use of the staple, DSPF and the scanner (reading) unit. |
| Section | |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

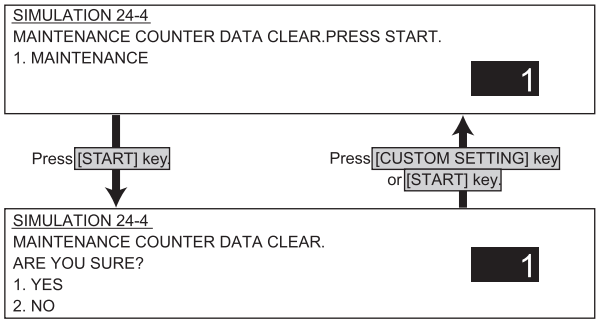



**<List of set values>**

| | |
|---|---|
| 1 | SPF paper passing quantity |
| 2 | Number of times of document scan |
| 3 | Number of times of stapling |
| 4 | Number of times of punching |
| 5 | Number of times of finish stamp |

## 24-4

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to reset the maintenance counter. |
| Section | |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

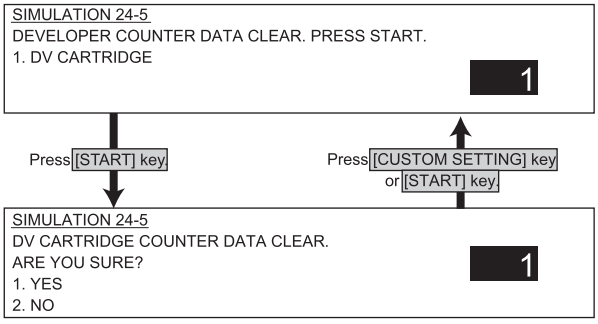



**<List of set values>**

| | |
|---|---|
| 1 | maintenance counter |

## 24-5

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to reset the developer counter.<br>(The developer counter of the DV unit installed is reset.) |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

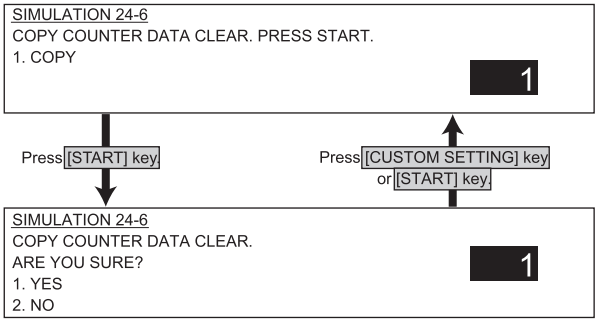



**<List of set values>**

| | |
|---|---|
| 1 | Developer cartridge counter |

## 24-6

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to reset the copy counter. |
| Section | |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

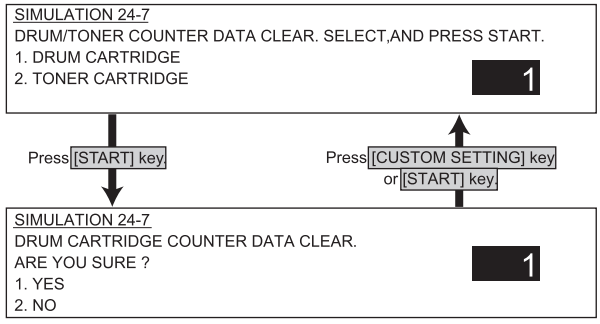



**<List of set values>**

| | |
|---|---|
| 1 | Copy effective paper counter |

## 24-7

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the OPC drum counter and the toner cartridge counter.<br>(Perform when the OPC drum is replaced.) |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

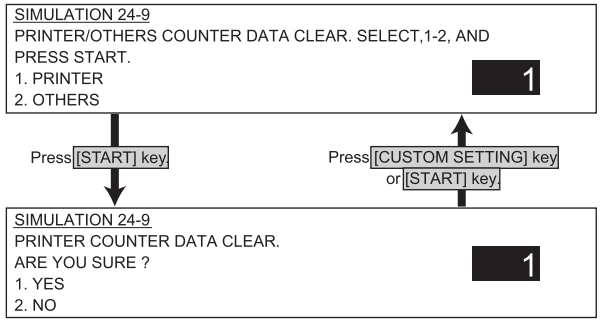



**<List of set values>**

| | |
|---|---|
| 1 | Drum cartridge counter |
| 2 | Toner cartridge counter |

## 24-9

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the printer print counter.<br>(After completion of maintenance, this counter must be cleared.) |
| Section | Printer |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

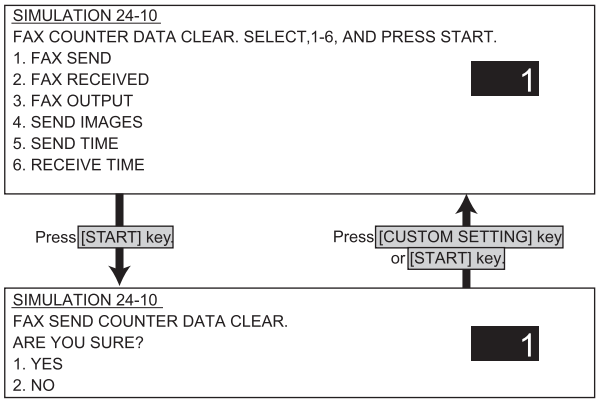



**<List of set values>**

| | |
|---|---|
| 1 | Printer counter |
| 2 | Other effective paper counter |

## 24-10

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear the FAX counter. |
| Section | FAX |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

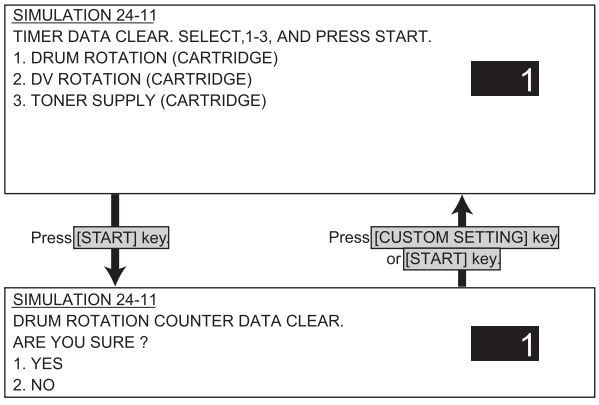



**<List of set values>**

| | |
|---|---|
| 1 | FAX SEND: Number of times of FAX sending |
| 2 | FAX RECEIVE: Number of times of FAX reception |
| 3 | FAX OUTPUT: FAX print quantity |
| 4 | SEND IMAGES: Sending quantity |
| 5 | SEND TIME: Time for sending |
| 6 | RECEIVE TIME: Time for reception |

## 24-11

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to reset the drum rotation time, toner motor rotation time, and developer rotation time counters. The developer counter of the DV unit installed is reset. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |

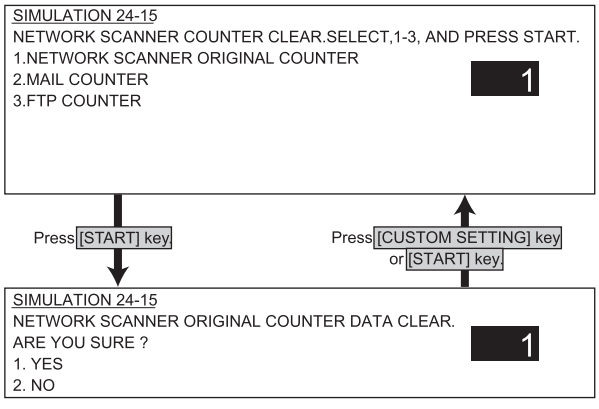



**<List of set values>**

| | |
|---|---|
| 1 | Drum rotating time (cartridge) |
| 2 | Developing unit rotating time (cartridge) |
| 3 | Toner supply time (cartridge) |

## 24-15

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to clear each counter in the scanner mode. |
| Section | |
| Item | Counter |
| Operation/Procedure | Select with 10 digit key pad and press START key.<br>The procedure below is executed and the display returns to the original state.<br>1: Counter is cleared 2: Not cleared |



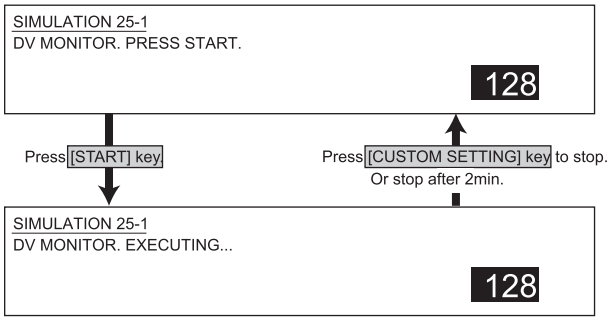

**<List of set values>**

| | |
|---|---|
| 1 | Document scan counter in the network scanner mode |
| 2 | Number of times of mail sending |
| 3 | Number of times of FTP sending |

**Main code 25**

## 25-1

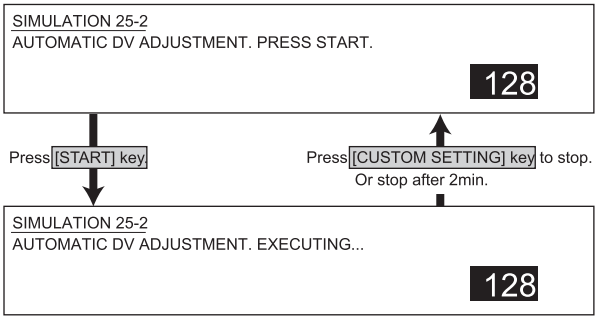
| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the main drive section (excluding the scanner (reading) section) and the toner density sensor. (The toner density sensor output can be monitored.) |
| Section | Drive |
| Item | Operation |
| Operation/Procedure | the toner density control sensor value is displayed. Press START key, and the main motor will rotate to start monitoring the toner density control sensor. |




## 25-2

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to initialize the toner density when replacing developer. (Auto adjustment) |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | |
| Operation/Procedure | The toner density control sensor value is displayed. Press START key, and the main motor will rotate. After stirring for 2 min, the toner density control sensor value is sampled 10 times and the average value is stored. |

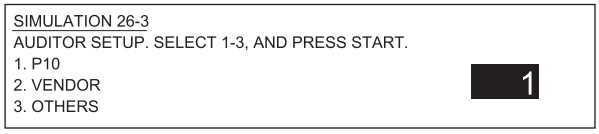
Note: Open front cover before entering SIM for Auto adjust.




**Main code 26**

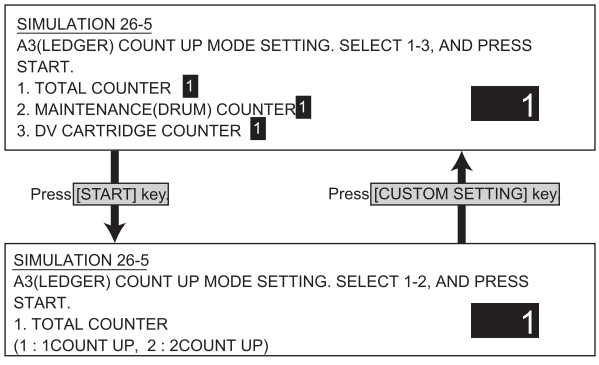
## 26-3

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the specification mode of the auditor. Setup must be made according to the use conditions under auditor. |
| Section | Auditor |
| Item | Spec |
| Operation/Procedure | The auditor setting is performed. (Default: 1) |




## 26-5

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the count mode of the total counter and the maintenance counter. |
| Section | |
| Item | Spec |
| Operation/Procedure | 1) Setting of the count-up number of A3/WLT paper passing (1 or 2) is made.<br>The current set value is highlighted on the right side of the item.<br>2) Setting of the count-up number of the selected counter is made.<br>1: 1 count up<br>2: 2 counts up (Default : 2) |


SIMULATION 26-5
A3(LEDGER) COUNT UP MODE SETTING. SELECT 1-3, AND PRESS START.
1. TOTAL COUNTER 1
2. MAINTENANCE(DRUM) COUNTER 1
3. DV CARTRIDGE COUNTER 1
1
Press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 26-5
A3(LEDGER) COUNT UP MODE SETTING. SELECT 1-2, AND PRESS START.
1. TOTAL COUNTER
(1 : 1COUNT UP, 2 : 2COUNT UP)
1

**<List of target counters>**

| | |
|---|---|
| 1 | Total counter |
| 2 | Maintenance counter/drum cartridge counter |
| 3 | Developer cartridge counter |

## 26-6

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the specification according to the destination. |
| Section | |
| Item | Spec |
| Operation/Procedure | After setting the destination, the power is turned off/on. |

* When NIC is installed, reset cannot be performed. Therefore, the power must be turned off/on.
* This simulation cannot change the FAX destination. Use SIM 66-2 to change the FAX destination.

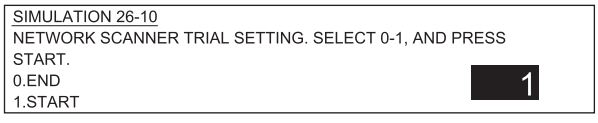
SIMULATION 26-6
DESTINATION SETUP. SELECT 1-10, AND PRESS START.
1. USA 2. CANADA 3. INCH
4. JAPAN 5.AB _B
6. EUROPE 7. UK 8. AUSTRALIA
9. AB_A 10. CHINA
1

**<List of destinations>**

| | |
|---|---|
| 1 | United States of America |
| 2 | Canada |
| 3 | Inch series EX |
| 4 | Japan |
| 5 | AB series B5 |
| 6 | Europe |
| 7 | UK |
| 8 | Australia |
| 9 | AB series A5 |
| 10 | China |

## 26-10

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the trial mode of the network scanner. |
| Section | |
| Item | Operation |
| Operation/Procedure | The network scanner trial mode is set. (Testing scanner without product key is limited to 500 sheets.) (Default: 0) |




**<List of set values>**

| | |
|---|---|
| 0 | Trial mode cancel |
| 1 | Trial mode start |

## 26-18

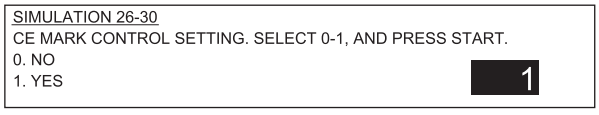
| Purpose | Setup |
|---|---|
| Function (Content) | Used to set Enable/Disable of toner save operation. (This simulation is enabled only in Japan and UK versions. (Depends on SIM 26-6 (Destination) setup). For the other destinations, user program P22 allows to make the similar setup.) |
| Section | |
| Item | Spec |
| Operation/Procedure | The toner mode setup is made. (Default: 1) |

**<List of set values>**

| | |
|---|---|
| 0 | Toner save mode is enabled. |
| 1 | Toner save mode is disabled. |

## 26-30

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the operation mode conforming to the CE mark (Europe standards). (For flickers when driving the fusing heater lamp.) |
| Section | |
| Item | Spec |
| Operation/Procedure | |

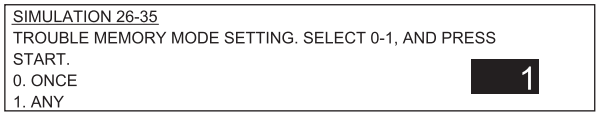



**<List of set values>**

| | |
|---|---|
| 0 | No control of CE mark |
| 1 | Control of CE mark |

## 26-35

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set whether the trouble history of SIM 22-4 is displayed as one-time trouble or continuous troubles when two or more number of a same trouble occurred. |
| Section | |
| Item | Spec |
| Operation/Procedure | The trouble memory storing method is set. (Default: 0) |



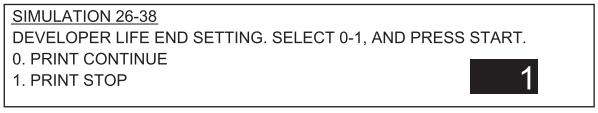

**<List of set values>**

| | |
|---|---|
| 0 | Only once (If same as the previous one, it is not stored.) |
| 1 | Any times (Though same as the previous one, it is stored.) |

## 26-38

| Purpose | Setup |
|---|---|
| Function (Content) | Used to stop printing when developer life is expired. |
| Section | Other |
| Item | Operation |
| Operation/Procedure | Print enable/disable is set when the developer cartridge is expired in a DM machine. (Default: 1) |

* This simulation is ignored in the AR model, that is, the operation is continued.

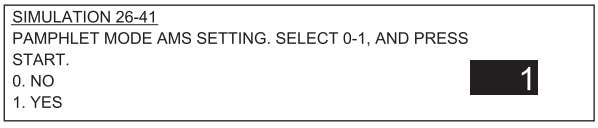



**<List of set values>**

| | |
|---|---|
| 0 | Print continue |
| 1 | Print stop |

## 26-41

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set Enable/Disable of the magnification ratio auto selection function (AMS) in the pamphlet copy mode. |
| Section | |
| Item | Spec |
| Operation/Procedure | Pamphlet mode AMS setting is enabled or disabled. Press START key to save. (Europe : 1, Others : 0) |




**<List of set values>**

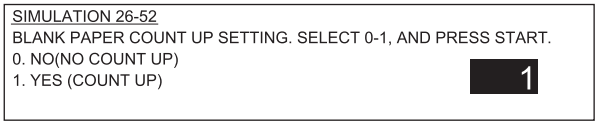
| | |
|---|---|
| 0 | AMS setting disabled |
| 1 | AMS setting enabled |

## 26-52

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set Enable/Disable of count-up when white paper is discharged. (White paper means the index paper (without copying) in the OHP index paper insertion mode, the front/rear covers (without copying) in the cover insertion mode, and white paper in the duplex exit mode (CA, etc.).) |
| Section | Paper transport (Paper exit, switchback, transport) |
| Item | |
| Operation/Procedure | Count-up setting of white paper exit mode is made. Press START key to save. (Default: 0 for Japan and Australia, 1 for the others) |

* The following counters are not counted up.

- •Copies counter
- •Printer counter
- •Department control counter
- •Total counter
- •Effective paper counter




**<List of set values>**

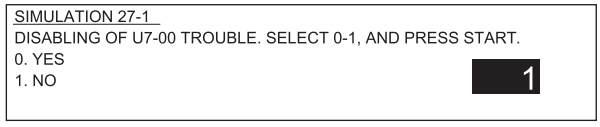
| | |
|---|---|
| 0 | Count-up is not made. |
| 1 | Count-up is made |

**Main code 27**

## 27-1

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the operation specifications when a communication trouble occurs between the host computer and MODEM (machine side). (When a communication trouble occurs between the host computer and MODEM (machine side), self diag display (U7-00) is displayed and setup is made to inhibit or allow printing. ) |
| Section | Communication (RIC/MODEM) |
| Item | Spec |
| Operation/Procedure | Yes/No of communication trouble between PC/MODEM is set. (Default: 0) |

(Japan only)

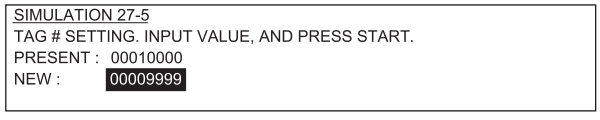



**<List of set values>**

| | |
|---|---|
| 0 | U7-00 is not displayed in a communication trouble. |
| 1 | U7-00 is displayed in a communication trouble. |

## 27-5

| Purpose | Setup |
|---|---|
| Function (Content) | Used to enter the machine tag No. (This function allows to check the machine tag No. from the computer.) |
| Section | Communication (RIC/MODEM) |
| Item | Data |
| Operation/Procedure | The tag number is set. The current value is displayed on PRESENT column. Enter a new tag number with 10 digit key pad and press START to store. |



**Main code 30**

## 30-1

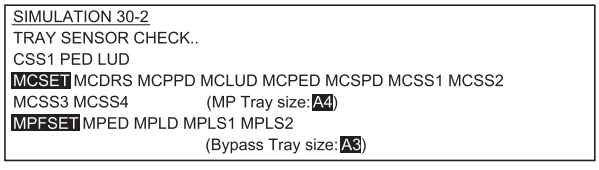
| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the paper feed, paper transport, and paper exit sections and their control circuits. |
| Section | |
| Item | Operation |
| Operation/Procedure | Then sensors of the machine are checked. The sensor name is highlighted when it is detected. |

**<List of display values>**

| | |
|---|---|
| PPD1 | Resist roller front paper detection |
| POD1 | Fusing rear transport detection 1 |
| POD2 | Fusing rear transport detection 2 |
| POD3 | Paper full detection |
| DVCRUin | DV unit version detection |
| PRCRUin | Process unit version detection |
| DSWL | Cabinet open detection |
| DSWF | Machine front door |

## 30-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the sensors and detectors in the paper feed section and their control circuits. (The operations of the sensors and detectors in the paper feed section can be monitored on the LCD display.) |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | Then sensors of the machine paper feed tray are checked. The sensor name is highlighted when it is detected. |


SIMULATION 30-2
TRAY SENSOR CHECK..
CSS1 PED LUD
MCSET MCDRS MCPPD MCLUD MCPED MCSPD MCSS1 MCSS2
MCSS3 MCSS4 (MP Tray size:A4)
MPFSET MPED MPLD MPLS1 MPLS2
(Bypass Tray size:A3)

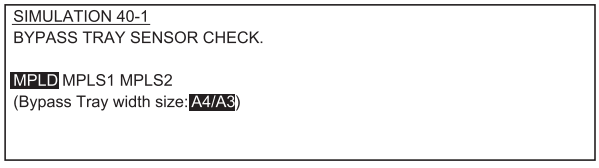
**<List of display values>**

| | | | |
|---|---|---|---|
| CSS1 | Tray 1 insertion detection | MCSS1 | MP tray size detection 1 |
| PED | Tray 1 paper empty detection | MCSS2 | MP tray size detection 2 |
| LUD | Tray 1 upper limit detection | MCSS3 | MP tray size detection 3 |
| MCSET | MP unit detection | MCSS4 | MP tray size detection 4 |
| MCDRS | MP unit side door open detection | MP Tray size | (The detection size of MP tray is displayed.) |
| MCPPD | MP tray transport detection | MPFSET | Manual feed tray detection |
| MCLUD | MP tray upper limit detection | MPED | Manual feed tray paper empty detection |
| MCPED | MP tray paper empty detection | MPLD | Manual feed length detection |
| MCSPD | MP tray remaining quantity detection | MPLS1 | Manual feed pull-out sensor 1 |
| | | MPLS2 | Manual feed pull-out sensor 2 |
| | | Bypass Tray size | (The detection size of manual feed tray is displayed.) |

**Main code 40**

## 40-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the manual paper feed tray paper size detectors and their control circuit. (The operations of the manual paper feed tray paper size detectors can be monitored on the LCD display.) |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The sensors of the manual feed tray are checked. The sensor name is highlighted when it is detected. |



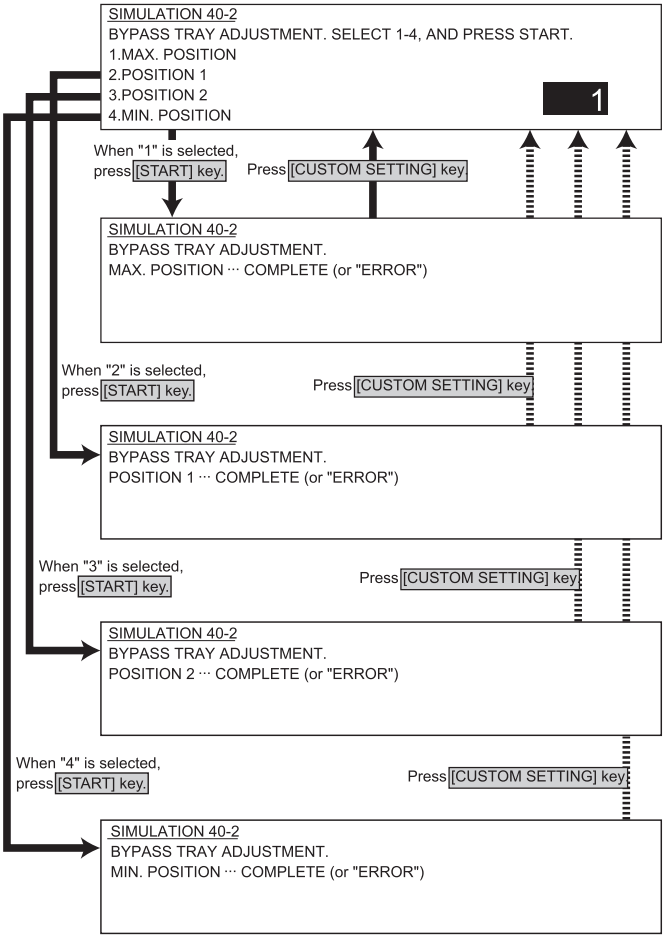

**<List of display values>**

| | |
|---|---|
| MPLD | Manual feed tray length detection |
| MPLS1 | Manual feed pull-out sensor 1 |
| MPLS2 | Manual feed pull-out sensor 2 |
| Bypass Tray width size | (The detected width of manual feed tray is displayed.) A4/A3, 11x, B5/B4, 8.5x, A4R, B5R, A5R, 5.5x, 7.25x, EXTRA |

## 40-2

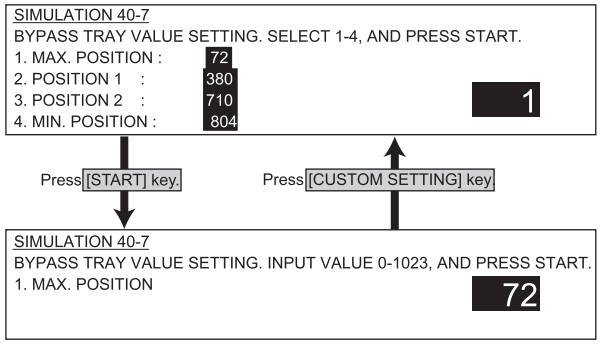
| | |
|---|---|
| Purpose | Adjustment, setup |
| Function (Content) | Used to adjust the detection level of the manual paper feed tray paper width volume. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The manual feed tray size is adjusted.<br>1) Extend the guide to the MAX. position. Select 1 and press START. When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.<br>2) Move the guide to A4R position. Select 2 and press START. When COMPLETE is displayed, press CUSTOME SETTING to return to the initial screen.<br>3) Move the guide to A5R position. Select 3 and press START. When COMPLETE is displayed, press CUSTOME SETTING to return to the initial screen.<br>4) Move the guide to MIN. position in the initial screen. Select 4 and press START. When COMPLETE is displayed, the adjustment is completed.<br>If ERROR is displayed in procedures 1) - 4), repeat the adjustment again." |

* This adjustment is performed only when the width detection volume is replaced.
Normally use SIM 40-7 for input.


SIMULATION 40-2
BYPASS TRAY ADJUSTMENT. SELECT 1-4, AND PRESS START.
1.MAX. POSITION
2.POSITION 1
3.POSITION 2
4.MIN. POSITION
1
When "1" is selected, press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 40-2
BYPASS TRAY ADJUSTMENT.
MAX. POSITION ··· COMPLETE (or "ERROR")
When "2" is selected, press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 40-2
BYPASS TRAY ADJUSTMENT.
POSITION 1 ··· COMPLETE (or "ERROR")
When "3" is selected, press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 40-2
BYPASS TRAY ADJUSTMENT.
POSITION 2 ··· COMPLETE (or "ERROR")
When "4" is selected, press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 40-2
BYPASS TRAY ADJUSTMENT.
MIN. POSITION ··· COMPLETE (or "ERROR")

## 40-7

| | |
|---|---|
| Purpose | Adjustment, setup |
| Function (Content) | Used to enter the adjustment value of the manual paper feed tray width detection level. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The adjustment value(Specified on the back of the tray pull-out section) of the manual feed tray size is entered. |

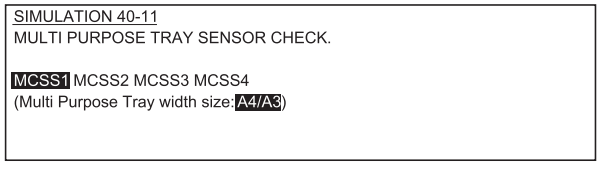

SIMULATION 40-7
BYPASS TRAY VALUE SETTING. SELECT 1-4, AND PRESS START.
1. MAX. POSITION : 72
2. POSITION 1 : 380
3. POSITION 2 : 710
4. MIN. POSITION : 804
1
Press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 40-7
BYPASS TRAY VALUE SETTING. INPUT VALUE 0-1023, AND PRESS START.
1. MAX. POSITION
72

**<List of set values>**

| | |
|---|---|
| 1 | Max. width(Max.) |
| 2 | Adjustment point 1(P1) |
| 3 | Adjustment point 2(P2) |
| 4 | Min. width(Min.) |

## 40-11

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the width detection level of the multi-purpose tray paper width detector. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The multi-purpose tray (MPT) sensors are checked. The sensor name is highlighted when it is highlighted. |

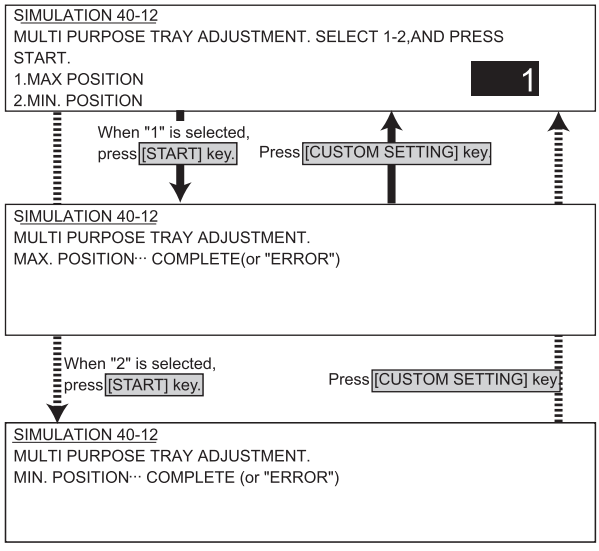



**<List of display values>**

| | |
|---|---|
| MCSS1 | Multi-purpose tray size detection 1 |
| MCSS2 | Multi-purpose tray size detection 2 |
| MCSS3 | Multi-purpose tray size detection 3 |
| MCSS4 | Multi-purpose tray size detection 4 |
| Multi Purpose Tray width size | (The detected size of MPT width is displayed.)<br>A4/A3, 11x, B5/B4, 8.5x, A4R, B5R, A5R, 5.5x, 7.25x, EXTRA |

## 40-12

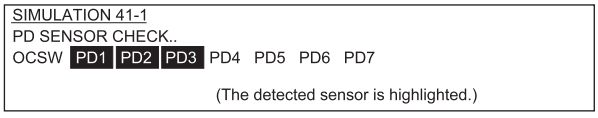
| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to adjust the width detection level of the multi-purpose tray paper width detector. |
| Section | Paper feed |
| Item | Operation |
| Operation/Procedure | The multi-purpose tray size is adjusted.<br>1) Extend the guide to the MAX. position.<br>Select 1 and press START.<br>When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.<br>2) Move the guide to MIN. position.<br>Select 2 and press START.<br>When COMPLETE is displayed, the adjustment is completed.<br>If ERROR is displayed in procedures 1) - 2), repeat the adjustment again. |




**Main code 41**

## 41-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the document size sensor and the related circuit. (The operation of the document size sensor can be monitored on the LCD display.) |
| Section | Other |
| Item | Operation |
| Operation/Procedure | The OC document sensor is checked. |

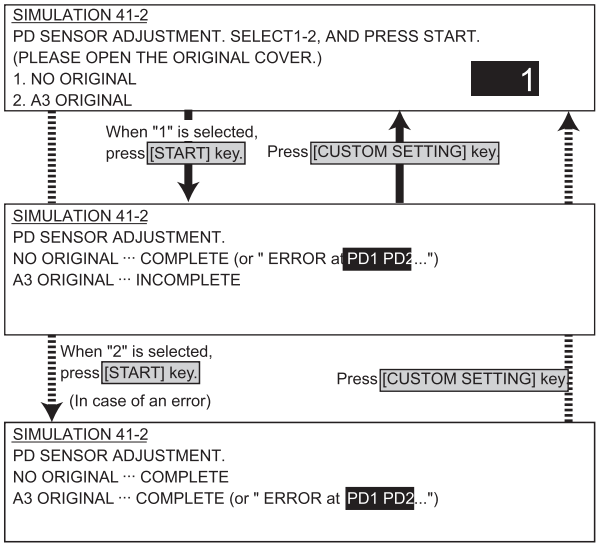



**<List of display values>**

| | |
|---|---|
| OCSW | Original cover state |
| | Open : Normal display |
| | Close : Highlighted |
| PD1 ~ 7 | Document sensor state |
| | No document : Normal display |
| | Document loaded : Highlighted |

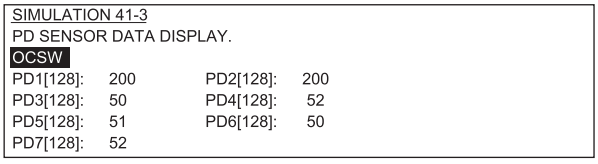
## 41-2

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the detection level of the document size sensor. |
| Section | Other |
| Item | Operation |
| Operation/Procedure | The OC document sensor is adjusted.<br>1) Open the original cover. Press 1 without an original. Press START, and COMPLETE is displayed. Press CUSTOM SETTING to return to the initial screen.<br>2) Place an A3 (or WLT) paper in the initial screen. Select 2 and press START.<br>When COMPLETE is displayed, the adjustment is completed.<br>If ERROR is displayed in procedures 1) - 2), repeat the adjustment again. |


SIMULATION 41-2
PD SENSOR ADJUSTMENT. SELECT1-2, AND PRESS START.
(PLEASE OPEN THE ORIGINAL COVER.)
1. NO ORIGINAL
2. A3 ORIGINAL
1
When "1" is selected, press [START] key.
Press [CUSTOM SETTING] key
SIMULATION 41-2
PD SENSOR ADJUSTMENT.
NO ORIGINAL ··· COMPLETE (or " ERROR at PD1 PD2...")
A3 ORIGINAL ··· INCOMPLETE
When "2" is selected, press [START] key.
(In case of an error)
Press [CUSTOM SETTING] key
SIMULATION 41-2
PD SENSOR ADJUSTMENT.
NO ORIGINAL ··· COMPLETE
A3 ORIGINAL ··· COMPLETE (or " ERROR at PD1 PD2...")

## 41-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation of the document size sensor and the related circuit.<br>(The output level of the document size sensor can be monitored on the LCD display.) |
| Section | Other |
| Item | Operation |
| Operation/Procedure | The OC document sensor detection level is displayed. (Real time display) |



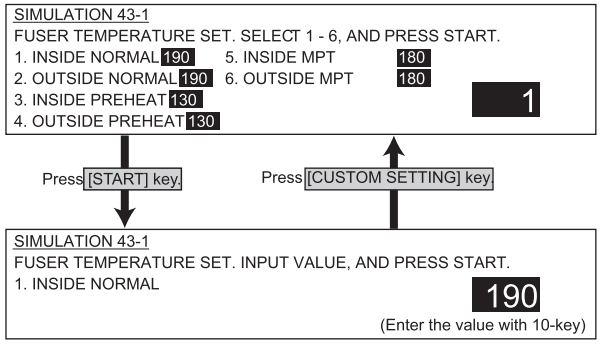

**<List of display values>**

| | |
|---|---|
| OCSW | Original cover state |
| | Open : Normal display |
| | Close : Highlighted |
| PD1 ~ 7 | PD sensor detection level |
| | Figures in [ ] indicate the adjustment threshold values (41-2 adjustment value). |

**Main code 43**

## 43-1

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the fusing temperature in each operation mode. |
| Section | Fusing, paper exit |
| Item | Operation |
| Operation/Procedure | The fusing control temperature is set.<br>The current set value is highlighted on the right of each item. Select an item (1 - 6), and enter a set value with 10 digit key pad. Press START key to store the value. |



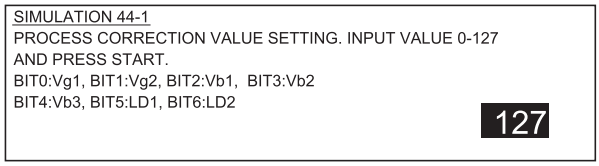

**<List of display values>**

| | | Default | Set range |
|---|---|---|---|
| 1 | Heater inside/Normal | 190 | 165~210 |
| 2 | Heater outside/Normal | 190 | 165~210 |
| 3 | Heater inside/Pre-heat | 150 | 100~160 |
| 4 | Heater outside/Pre-heat | 150 | 100~160 |
| 5 | Heater inside/Manual paper feed used | 190 | 165~210 |
| 6 | Heater outside/Manual paper feed used | 190 | 165~210 |

**Main code 44**

## 44-1

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set Enable/Disable of each correction operation in the image forming (process) section. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Operation |
| Operation/Procedure | |

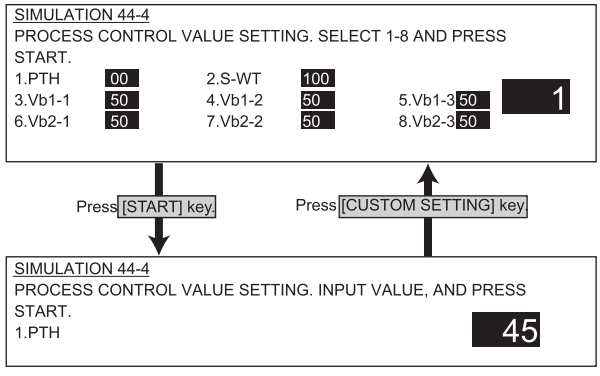



bit = 1 : Correction enabled

| Bit | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | LD2 | LD1 | Vb3 | Vb2 | Vb1 | Vg2 | Vg1 |

## 44-4

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the target image (reference) density level in the developing bias voltage correction. |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Data |
| Operation/Procedure | The process correction value is set.<br>Select an item (1 - 9), and enter a value with 10 digit key pad. Press SYTART to store the value. |




**<List of display values>**

| | | |
|---|---|---|
| 1 | PTH *1 | Process Thermistor temperature forcible set value (0-99°C : Normal 0) |
| 2 | S_WT *2 | Vb (Devepoping bias correction value) rising correction wait time (0-180sec : Default 90) |
| 3 | Vb1-1 *3 | Vb (Devepoping bias correction value) correction quantity (First rotation) 1 (0 - 150V : Default 50) |
| 4 | Vb1-2 *3 | Vb (Devepoping bias correction value) correction quantity (First rotation) 2 (0 - 150V : Default 50) |
| 5 | Vb1-3 *3 | Vb (Devepoping bias correction value) correction quantity (First rotation) 3 (0 - 150V : Default 50) |
| 6 | Vb2-1 *4 | Vb (Devepoping bias correction value) correction quantity (Second rotation) 1 (0 - 50V : Default 15) |
| 7 | Vb2-2 *4 | Vb (Devepoping bias correction value) correction quantity (Second rotation) 2 (0 - 50V : Default 15) |
| 8 | Vb2-3 *4 | Vb (Devepoping bias correction value) correction quantity (Second rotation) 3 (0 - 50V : Default 15) |

*1: Only when this value is 0, control is performed with the actual measurement value of process Thermistor.
If it is not 0, control is forcibly performed.

*2: When the drum motor standby time is greater than this value, the correction of SIM 44-1 Vb1 is performed.

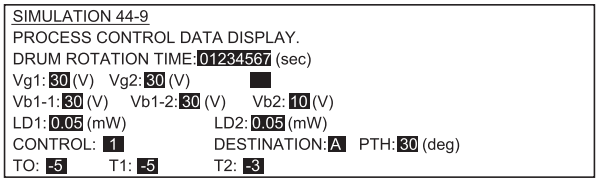
*3: This value is SIM 44-9 Vb1-1 correction value. The value corresponding to the drum rotating time is used.

*4: This value is SIM 44-9 Vb1-2 correction value. The value corresponding to the drum rotating time is used.

| DRUM ROTATION TOME | | Vb1 correction value (X' th rotation) |
|---|---|---|
| 45PPM | 35PPM | |
| 0 ~ 40K (sec) | 0 ~ 50K (sec) | (X' th rotation) -1 |
| 40 ~ 80K (sec) | 50 ~ 95K (sec) | (X' th rotation) -2 |
| 80K ~ (sec) | 95K ~ (sec) | (X' th rotation) -3 |

## 44-9

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display) |
| Function (Content) | Used to check the result (main charger grid voltage developing bias voltage, laser power, etc.) of correction (process correction) in the image forming section.<br>(By this simulation, the correction operation can be checked.) |
| Section | Process<br>(OPC drum, developing, transfer, cleaning) |
| Item | Data |
| Operation/Procedure | The process correction value is checked. |


SIMULATION 44-9
PROCESS CONTROL DATA DISPLAY.
DRUM ROTATION TIME: 01234567 (sec)
Vg1: 30 (V) Vg2: 30 (V)
Vb1-1: 30 (V) Vb1-2: 30 (V) Vb2: 10 (V)
LD1: 0.05 (mW) LD2: 0.05 (mW)
CONTROL: 1 DESTINATION: A PTH: 30 (deg)
TO: -5 T1: -5 T2: -3

**<List of display values>**

| | |
|---|---|
| DRUM ROTATION TIME | Drum rotation time |
| Vg1~Vg2 | Grid voltage correction value |
| Vb1-1 *1 | Vb (Developing bias correction value) correction value (first rotation) |
| Vb1-2 *1 | Vb (Developing bias correction value) correction value (second rotation) |
| Vb2 | Developing bias correction value |
| Vb3 | Developing bias correction value |
| LD1 | Laser power correction value |
| LD2 | Laser power correction value |
| CONTROL | CRUM control spec (1 - 3) |
| DESTINATION | CRUM destination (A - J) |
| PTH *2 | Process Thermistor temperature value |
| T0 | Toner control correction value (Rotation time correction) (±100) |
| T1 | Toner control correction value T1 (Temperature correction) (±100) |
| T2 | Toner control correction value T2 (Temperature correction) (±100) |

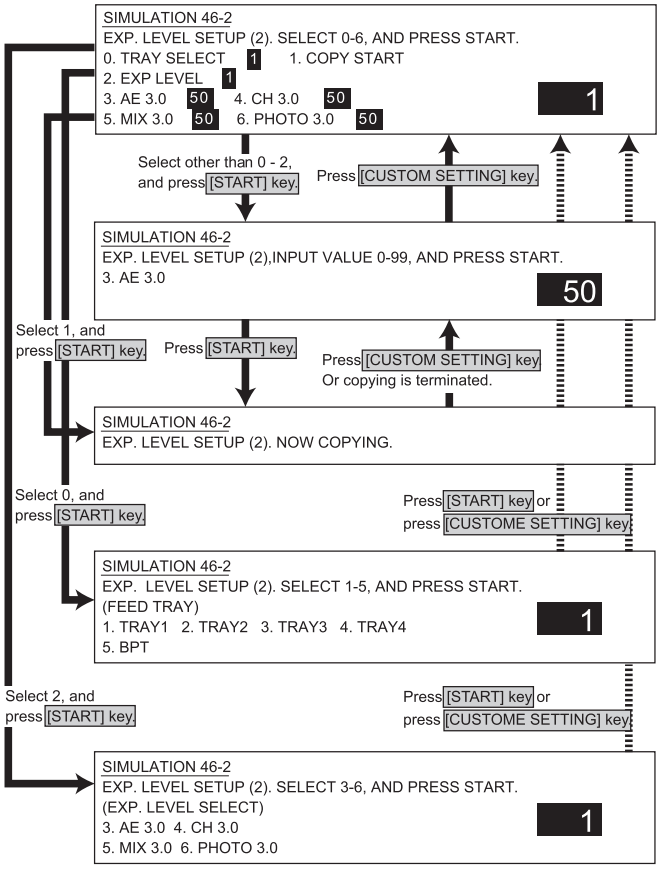
*1: Vb1-1 and Vb1-2 are enabled or disabled by SIM 44-1 Vb1 setup.

*2: When PTH is set to 0 with SIM 44-4, the detected value in this adjustment is displayed. If PTH is set to other than 0, the value set with SIM 44-4 is displayed.

**Main code 46**

## 46-2

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the copy density in the copy mode (binary, auto, text, text/photo, photo mode). An adjustment with this simulation affects all the reading density adjustment values. |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected. (Auto adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 0-6, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. AE 3.0 50 4. CH 3.0 50
5. MIX 3.0 50 6. PHOTO 3.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2),INPUT VALUE 0-99, AND PRESS START.
3. AE 3.0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-2
EXP. LEVEL SETUP (2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-2
EXP. LEVEL SETUP (2). SELECT 3-6, AND PRESS START.
(EXP. LEVEL SELECT)
3. AE 3.0 4. CH 3.0
5. MIX 3.0 6. PHOTO 3.0
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | Exposure level selection |
| 3 | AE mode |
| 4 | Text mode 30 |
| 5 | Text/Photo mode 30 |
| 6 | Photo mode 30 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

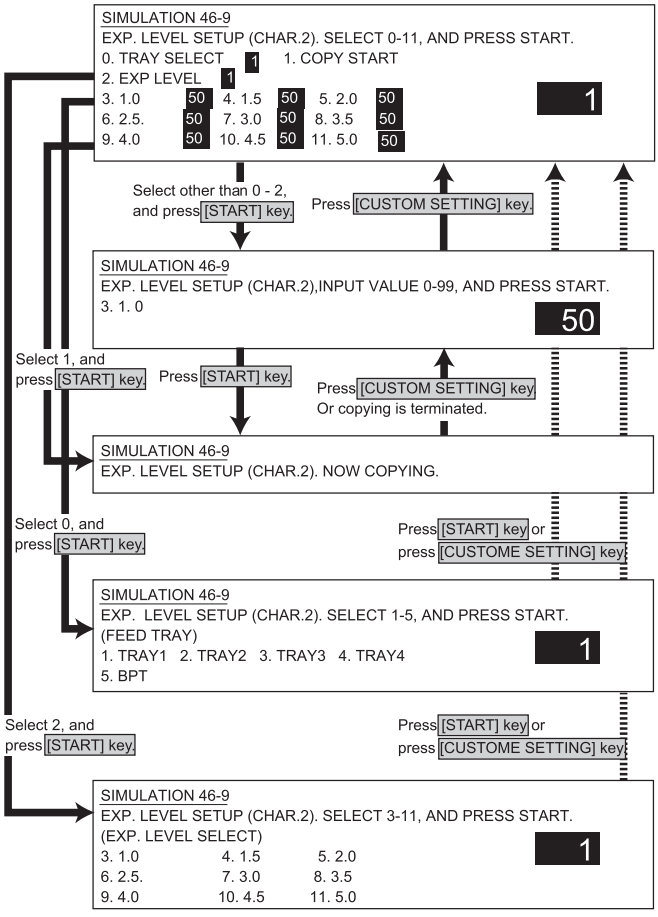
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | AE mode |
| 4 | Text mode 30 |
| 5 | Text/Photo mode 30 |
| 6 | Photo mode 30 |

## 46-9

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the print density for each density level (display value) in the copy mode (binary-Text mode).<br>A desired reading density can be set for each density level (display value). |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(Text mode)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 0-11, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. 1.0 50 4. 1.5 50 5. 2.0 50
6. 2.5. 50 7. 3.0 50 8. 3.5 50
9. 4.0 50 10. 4.5 50 11. 5.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2),INPUT VALUE 0-99, AND PRESS START.
3. 1. 0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-9
EXP. LEVEL SETUP (CHAR.2). SELECT 3-11, AND PRESS START.
(EXP. LEVEL SELECT)
3. 1.0 4. 1.5 5. 2.0
6. 2.5. 7. 3.0 8. 3.5
9. 4.0 10. 4.5 11. 5.0
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | Exposure level selection |
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

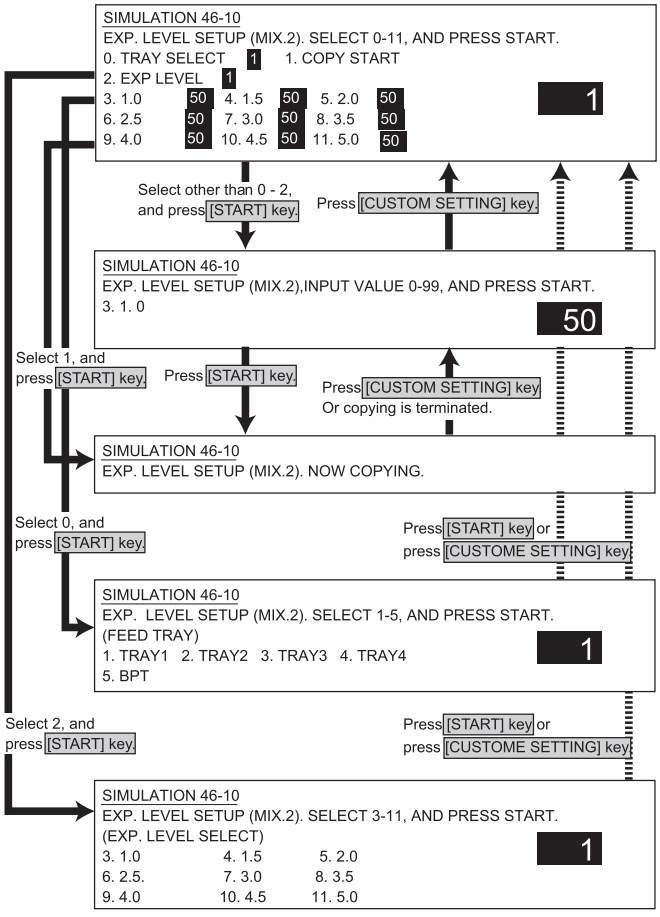
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

## 46-10

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the print density for each density level (display value) in the copy mode (binary-Text/Photo mode).<br>A desired reading density can be set for each density level (display value). |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected. (Text/Photo mode)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-10
EXP. LEVEL SETUP (MIX.2). SELECT 0-11, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. 1.0 50 4. 1.5 50 5. 2.0 50
6. 2.5 50 7. 3.0 50 8. 3.5 50
9. 4.0 50 10. 4.5 50 11. 5.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-10
EXP. LEVEL SETUP (MIX.2),INPUT VALUE 0-99, AND PRESS START.
3. 1. 0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-10
EXP. LEVEL SETUP (MIX.2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-10
EXP. LEVEL SETUP (MIX.2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-10
EXP. LEVEL SETUP (MIX.2). SELECT 3-11, AND PRESS START.
(EXP. LEVEL SELECT)
3. 1.0 4. 1.5 5. 2.0
6. 2.5. 7. 3.0 8. 3.5
9. 4.0 10. 4.5 11. 5.0
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | Exposure level selection |
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

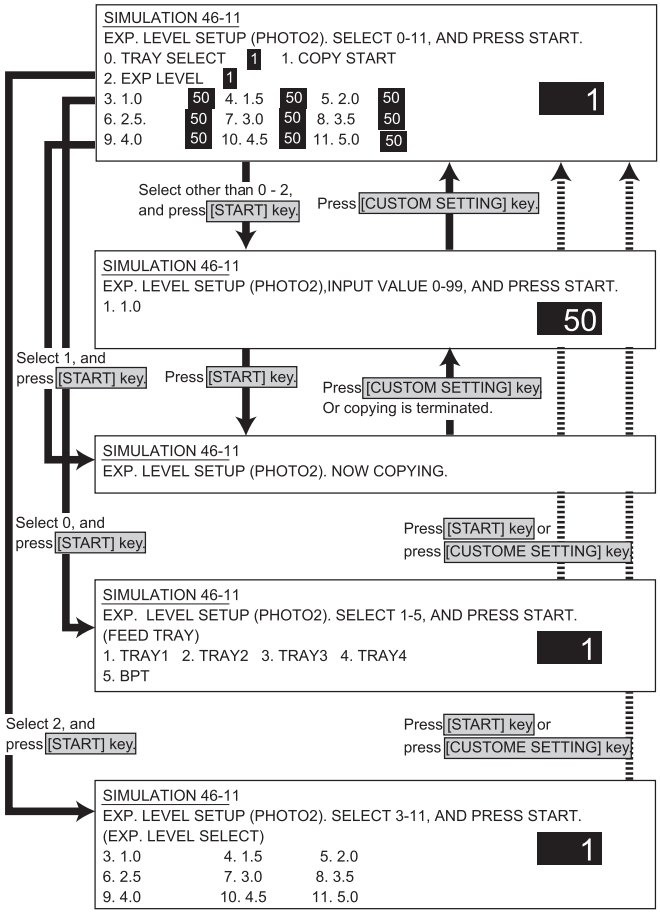
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

## 46-11

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the print density for each density level (display value) in the copy mode (binary-Photo mode).<br>A desired reading density can be set for each density level (display value). |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(Photo mode)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-11
EXP. LEVEL SETUP (PHOTO2). SELECT 0-11, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. EXP LEVEL 1
3. 1.0 50 4. 1.5 50 5. 2.0 50
6. 2.5. 50 7. 3.0 50 8. 3.5 50
9. 4.0 50 10. 4.5 50 11. 5.0 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-11
EXP. LEVEL SETUP (PHOTO2),INPUT VALUE 0-99, AND PRESS START.
1. 1.0
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-11
EXP. LEVEL SETUP (PHOTO2). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-11
EXP. LEVEL SETUP (PHOTO2). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-11
EXP. LEVEL SETUP (PHOTO2). SELECT 3-11, AND PRESS START.
(EXP. LEVEL SELECT)
3. 1.0 4. 1.5 5. 2.0
6. 2.5 7. 3.0 8. 3.5
9. 4.0 10. 4.5 11. 5.0
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | Exposure level selection |
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

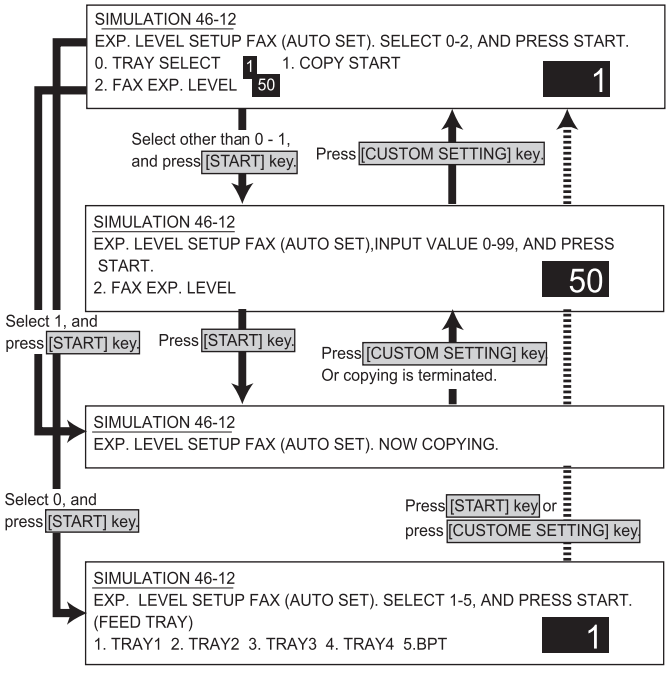
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Exposure level 1.0 |
| 4 | Exposure level 1.5 |
| 5 | Exposure level 2.0 |
| 6 | Exposure level 2.5 |
| 7 | Exposure level 3.0 |
| 8 | Exposure level 3.5 |
| 9 | Exposure level 4.0 |
| 10 | Exposure level 4.5 |
| 11 | Exposure level 5.0 |

## 46-12

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the print density in the FAX mode (all modes). An adjustment with this simulation affects all the reading density adjustment values. (Only when FAX is installed) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(FAX auto adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2) |


SIMULATION 46-12
EXP. LEVEL SETUP FAX (AUTO SET). SELECT 0-2, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. FAX EXP. LEVEL 50
1
Select other than 0 - 1, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-12
EXP. LEVEL SETUP FAX (AUTO SET),INPUT VALUE 0-99, AND PRESS START.
2. FAX EXP. LEVEL
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-12
EXP. LEVEL SETUP FAX (AUTO SET). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-12
EXP. LEVEL SETUP FAX (AUTO SET). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4 5.BPT
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | FAX mode exposure setup |

**<List of display values 1>**

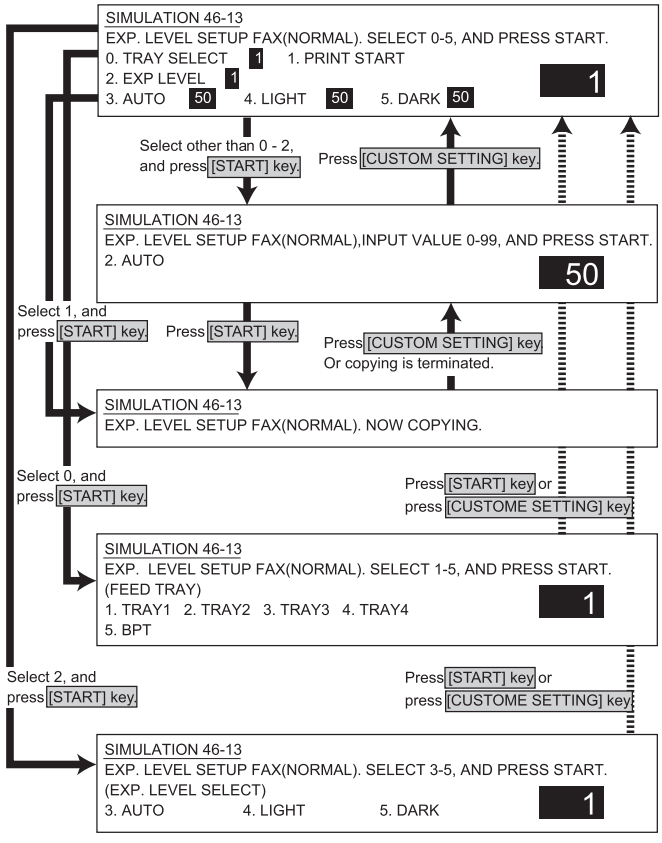
| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

## 46-13

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the reading density in the FAX mode (normal mode).<br>(Only when FAX is installed.)" |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(FAX normal text mode individual adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-13
EXP. LEVEL SETUP FAX(NORMAL). SELECT 0-5, AND PRESS START.
0. TRAY SELECT 1 1. PRINT START
2. EXP LEVEL 1
3. AUTO 50 4. LIGHT 50 5. DARK 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-13
EXP. LEVEL SETUP FAX(NORMAL),INPUT VALUE 0-99, AND PRESS START.
2. AUTO
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-13
EXP. LEVEL SETUP FAX(NORMAL). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-13
EXP. LEVEL SETUP FAX(NORMAL). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-13
EXP. LEVEL SETUP FAX(NORMAL). SELECT 3-5, AND PRESS START.
(EXP. LEVEL SELECT)
3. AUTO 4. LIGHT 5. DARK
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Print start (Default) |
| 2 | Exposure level selection |
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | paper empty | PAPER EMPTY. |

**<List of set values 2>**

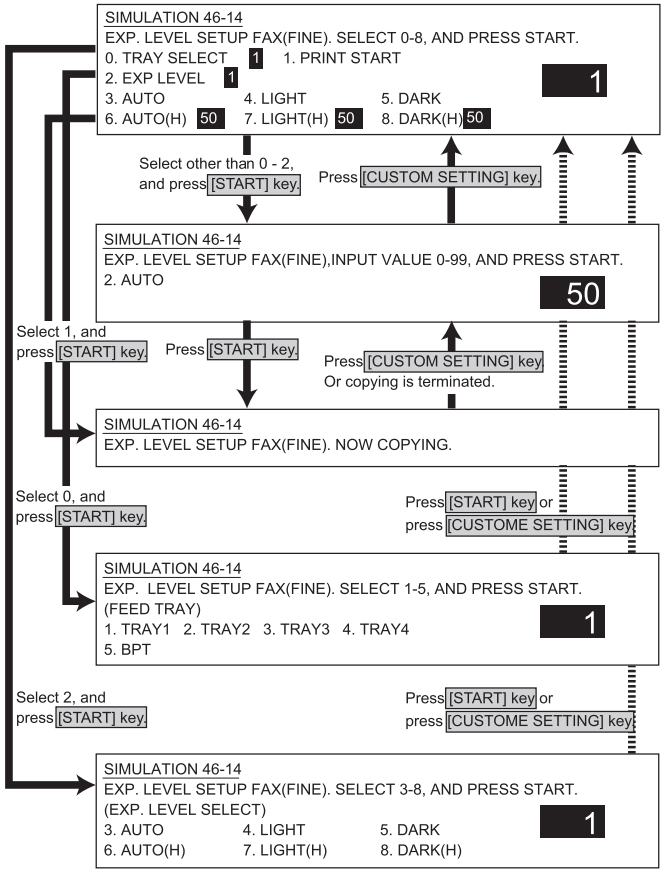
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |

## 46-14

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the reading density in the FAX mode (small text mode). (Only when FAX is installed.) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(FAX small text mode individual adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-14
EXP. LEVEL SETUP FAX(FINE). SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1 1. PRINT START
2. EXP LEVEL 1
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 50 7. LIGHT(H) 50 8. DARK(H) 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-14
EXP. LEVEL SETUP FAX(FINE),INPUT VALUE 0-99, AND PRESS START.
2. AUTO
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 46-14
EXP. LEVEL SETUP FAX(FINE). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-14
EXP. LEVEL SETUP FAX(FINE). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-14
EXP. LEVEL SETUP FAX(FINE). SELECT 3-8, AND PRESS START.
(EXP. LEVEL SELECT)
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 7. LIGHT(H) 8. DARK(H)
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Print start (Default) |
| 2 | Exposure level selection |
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

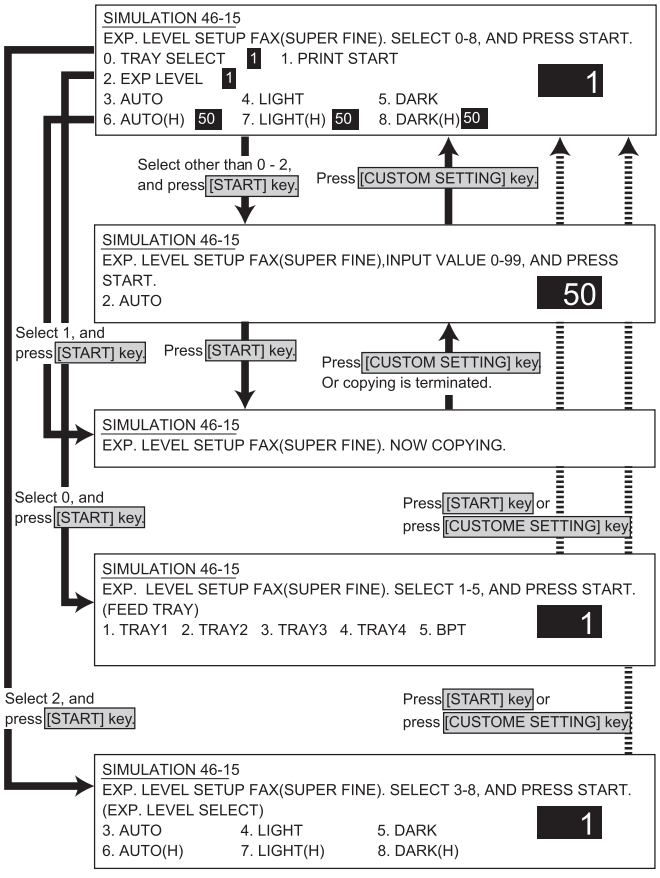
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

## 46-15

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the reading density in the FAX mode (fine mode). (Only when FAX is installed.) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(FAX fine mode individual adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-15
EXP. LEVEL SETUP FAX(SUPER FINE). SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1 1. PRINT START
2. EXP LEVEL 1
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 50 7. LIGHT(H) 50 8. DARK(H) 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-15
EXP. LEVEL SETUP FAX(SUPER FINE),INPUT VALUE 0-99, AND PRESS START.
2. AUTO
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 46-15
EXP. LEVEL SETUP FAX(SUPER FINE). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-15
EXP. LEVEL SETUP FAX(SUPER FINE). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4 5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-15
EXP. LEVEL SETUP FAX(SUPER FINE). SELECT 3-8, AND PRESS START.
(EXP. LEVEL SELECT)
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 7. LIGHT(H) 8. DARK(H)
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Print start (Default) |
| 2 | Exposure level selection |
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

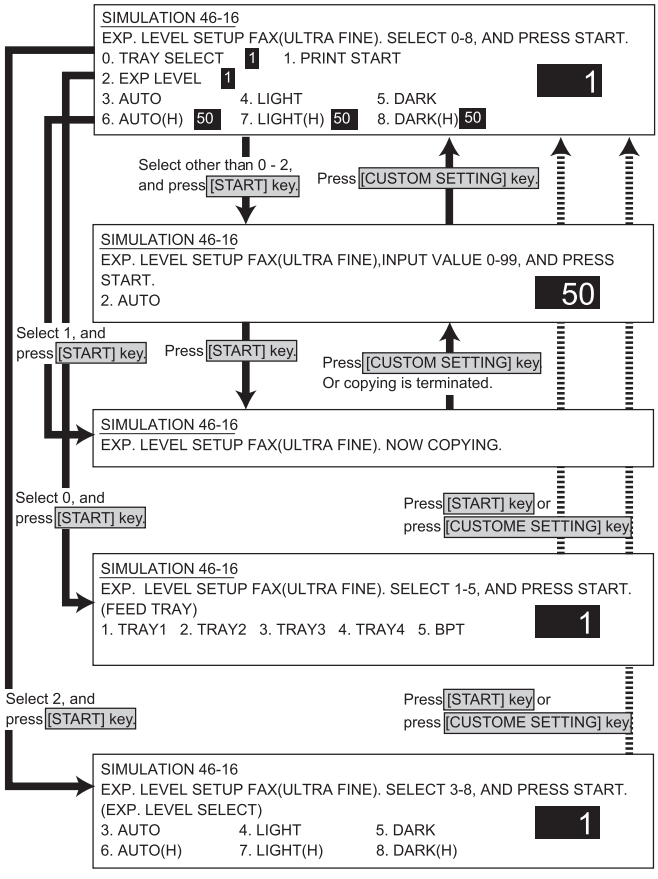
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

## 46-16

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the reading density in the FAX mode (super fine mode). (Only when FAX is installed.) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | The exposure mode to be set is selected.<br>(FAX super fine mode individual adjustment)<br>1) The current set value is highlighted on the right side of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default: 50, set range: 0 - 99)<br>3) Press START, and copying is started and the set value is stored. (Display value 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Select an exposure level. (Set value 3) |


SIMULATION 46-16
EXP. LEVEL SETUP FAX(ULTRA FINE). SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1 1. PRINT START
2. EXP LEVEL 1
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 50 7. LIGHT(H) 50 8. DARK(H) 50
1
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-16
EXP. LEVEL SETUP FAX(ULTRA FINE),INPUT VALUE 0-99, AND PRESS START.
2. AUTO
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 46-16
EXP. LEVEL SETUP FAX(ULTRA FINE). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-16
EXP. LEVEL SETUP FAX(ULTRA FINE). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4 5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-16
EXP. LEVEL SETUP FAX(ULTRA FINE). SELECT 3-8, AND PRESS START.
(EXP. LEVEL SELECT)
3. AUTO 4. LIGHT 5. DARK
6. AUTO(H) 7. LIGHT(H) 8. DARK(H)
1

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Print start (Default) |
| 2 | Exposure level selection |
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

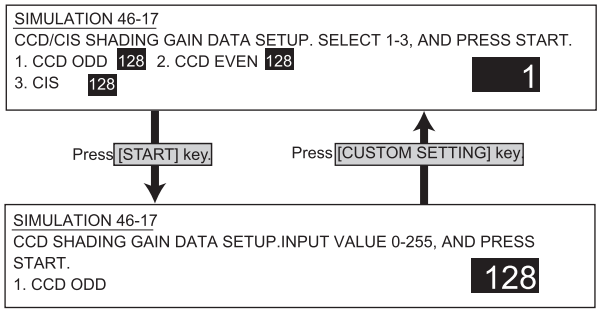
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| 3 | Auto |
| 4 | Bright |
| 5 | Dark |
| 6 | Auto (Half tone) |
| 7 | Bright (half tone) |
| 8 | Dark (Half tone) |

## 46-17

| Purpose | Adjustment, setup, operation data output, check (display) |
|---|---|
| Function (Content) | Used to adjust the CCD/CIS shading reference value. |
| Section | Scanner (reading) / DSPF (reading) |
| Item | Operation |
| Operation/Procedure | 1) Change the shading reference value of CCD/CIS. The current set value is displayed don the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad. Press START to store the set value. (Default: 128, set range: 0 - 255) |

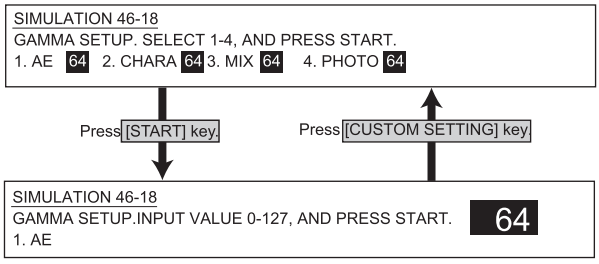

SIMULATION 46-17
CCD/CIS SHADING GAIN DATA SETUP. SELECT 1-3, AND PRESS START.
1. CCD ODD 128 2. CCD EVEN 128
3. CIS 128
1
Press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-17
CCD SHADING GAIN DATA SETUP.INPUT VALUE 0-255, AND PRESS START.
1. CCD ODD
128

**<Set values>**

| | |
|---|---|
| 1 | CCD CDD |
| 2 | CCD EVEN |
| 3 | CS |

## 46-18

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust gamma (density gradient) in each copy mode. |
| Section | |
| Item | Picture quality |
| Operation/Procedure | 1) Change the gamma value.<br>The current set value is displayed on the right of each item. (Set value)<br>2) Set the gamma with 10 digit key pad.<br>Press START to store the set value.<br>(Default 64, set range 0 - 127)<br>3) The greater the value is, the greater the gradient is. |

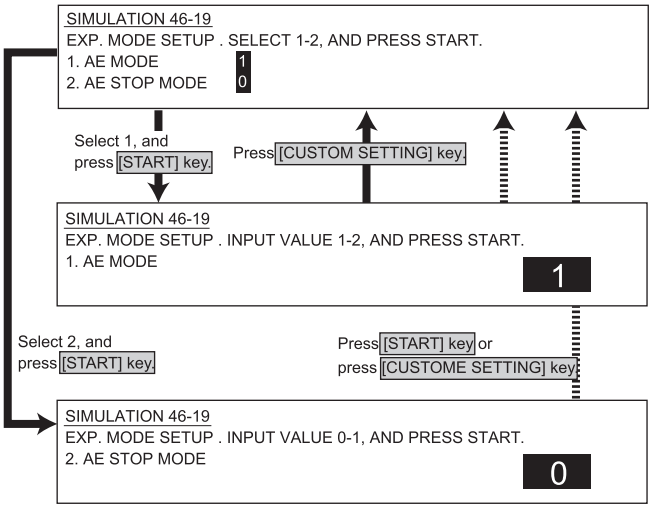

SIMULATION 46-18
GAMMA SETUP. SELECT 1-4, AND PRESS START.
1. AE 64 2. CHARA 64 3. MIX 64 4. PHOTO 64
Press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-18
GAMMA SETUP.INPUT VALUE 0-127, AND PRESS START.
1. AE
64

**<Set values>**

| | |
|---|---|
| 1 | AE mode |
| 2 | Text mode |
| 3 | Text/Photo mode |
| 4 | Photo mode |

## 46-19

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust gamma (density gradient) in the auto copy mode and to set the density detection area, and to set the image process mode. |
| Section | |
| Item | Picture quality |
| Operation/Procedure | 1) Change the control method of exposure mode.<br>The current set value is displayed on the right of each item. (Set value 1)<br>2) Set with 10 digit key pad. (AE mode)<br>3) Set with 10 digit key pad. (AE fixed mode) |


SIMULATION 46-19
EXP. MODE SETUP . SELECT 1-2, AND PRESS START.
1. AE MODE 1
2. AE STOP MODE 0
Select 1, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 46-19
EXP. MODE SETUP . INPUT VALUE 1-2, AND PRESS START.
1. AE MODE
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 46-19
EXP. MODE SETUP . INPUT VALUE 0-1, AND PRESS START.
2. AE STOP MODE
0

**<Set value 1>**

| | |
|---|---|
| 1 | AE mode |
| 2 | AE fixed mode |

**<AE mode>**

| | |
|---|---|
| 1 | Picture priority mode |
| 2 | Toner consumption priority mode |

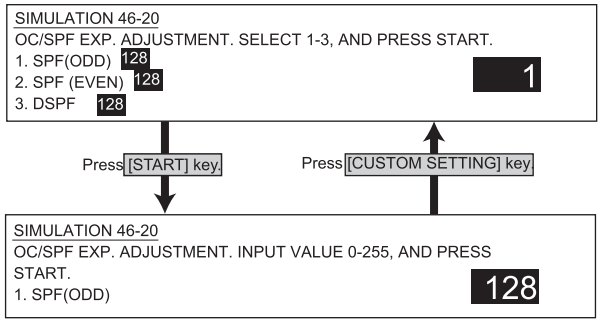
**<AE fixed mode>**

| | |
|---|---|
| 0 | AE fixed function : OFF |
| 1 | AE fixed function : ON |

Default : 0

## 46-20

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the copy density correction in the SPF/DSPF copy mode for the document table copy mode. This adjustment is made so that the copy density becomes the same as that in the document table copy mode. |
| Section | |
| Item | Picture quality |
| Operation/Procedure | 1) The exposure correction of OC and SPF is performed. The current set value is displayed on the right of each item. (Set value)<br>2) Set with 10 digit key pad.<br>(Default 128, set range 0 -255)<br>3) Add "Set value - 128" to the shading adjustment value (SIM 46-17). |



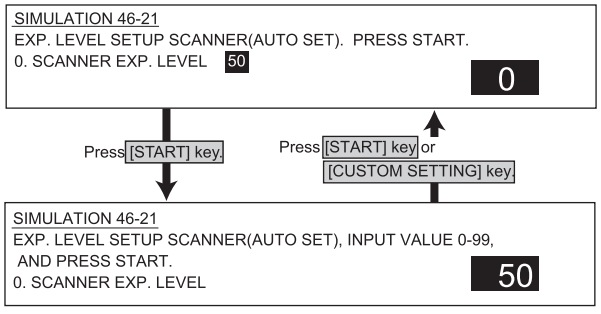

**<Set value>**

| | |
|---|---|
| 1 | SPF (surface CCD odd pixel) |
| 2 | SPF (surface CCD even pixel) |
| 3 | DSPF (back surface) |

## 46-21

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to adjust the scanner exposure level. (1 mode auto adjustment) |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) Select the exposure mode to be set. (Scanner auto adjustment) The current set value is highlighted on the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default 50, set range 0 - 99) |

* The set value is changed only, and printing is not performed.



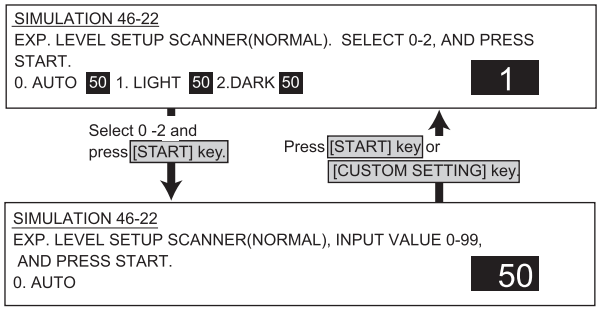

**<Set value>**

| | |
|---|---|
| 0 | Scanner mode exposure setup |

## 46-22

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to adjust the scanner exposure level and to make individual setup. (Normal mode) |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) Select the exposure mode to be set. (Scanner normal text mode individual adjustment) The current set value is highlighted on the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default 50, set range 0 - 99) |

* The set value is changed only, and printing is not performed.


SIMULATION 46-22
EXP. LEVEL SETUP SCANNER(NORMAL). SELECT 0-2, AND PRESS START.
0. AUTO 50 1. LIGHT 50 2.DARK 50
1
Select 0 -2 and press [START] key.
Press [START] key or
[CUSTOM SETTING] key.
SIMULATION 46-22
EXP. LEVEL SETUP SCANNER(NORMAL), INPUT VALUE 0-99,
AND PRESS START.
0. AUTO
50

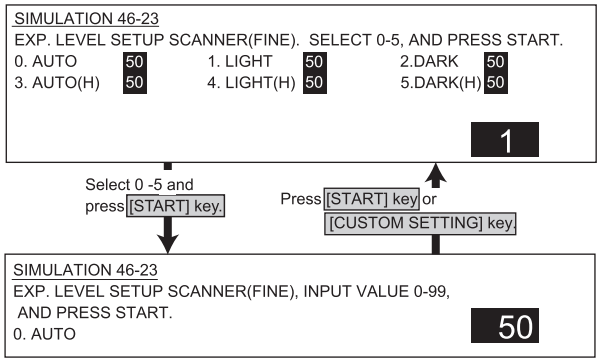
**<Set value>**

| | |
|---|---|
| 0 | Auto |
| 1 | Bright |
| 2 | Dark |

## 46-23

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to adjust the scanner exposure level and to make individual setup. (Small text mode) |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) Select the exposure mode to be set. (Scanner small text mode individual adjustment) The current set value is highlighted on the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default 50, set range 0 - 99) |

* The set value is changed only, and printing is not performed.


SIMULATION 46-23
EXP. LEVEL SETUP SCANNER(FINE). SELECT 0-5, AND PRESS START.
0. AUTO 50 1. LIGHT 50 2.DARK 50
3. AUTO(H) 50 4. LIGHT(H) 50 5.DARK(H) 50
1
Select 0 -5 and press [START] key.
Press [START] key or
[CUSTOM SETTING] key.
SIMULATION 46-23
EXP. LEVEL SETUP SCANNER(FINE), INPUT VALUE 0-99,
AND PRESS START.
0. AUTO
50

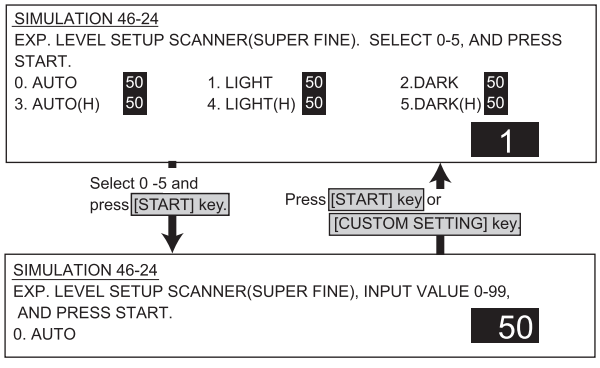
**<Set value>**

| | | | |
|---|---|---|---|
| 0 | Auto | 3 | Auto (half tone) |
| 1 | Bright | 4 | Bright (Half tone) |
| 2 | Dark | 5 | Dark (Half tone) |

## 46-24

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to adjust the scanner exposure level and to make individual setup. (Fine mode) |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) Select the exposure mode to be set. (Scanner fine mode individual adjustment) The current set value is highlighted on the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad. Press P to store the set value. (Default 50, set range 0 - 99) |

* The set value is changed only, and printing is not performed.


SIMULATION 46-24
EXP. LEVEL SETUP SCANNER(SUPER FINE). SELECT 0-5, AND PRESS START.
0. AUTO 50 1. LIGHT 50 2.DARK 50
3. AUTO(H) 50 4. LIGHT(H) 50 5.DARK(H) 50
1
Select 0 -5 and press [START] key.
Press [START] key or
[CUSTOM SETTING] key.
SIMULATION 46-24
EXP. LEVEL SETUP SCANNER(SUPER FINE), INPUT VALUE 0-99,
AND PRESS START.
0. AUTO
50

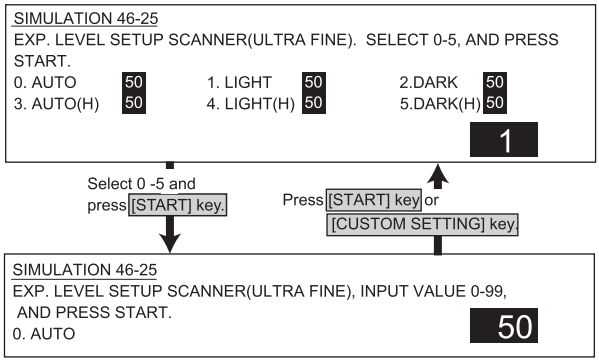
**<Set value>**

| | | | |
|---|---|---|---|
| 0 | Auto | 3 | Auto (half tone) |
| 1 | Bright | 4 | Bright (Half tone) |
| 2 | Dark | 5 | Dark (Half tone) |

## 46-25

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to adjust the scanner exposure level and to make individual setup. (Super fine mode) |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) Select the exposure mode to be set.<br>(Scanner super fine mode individual adjustment)<br>The current set value is highlighted on the right of each item. (Set value)<br>2) Set the exposure level with 10 digit key pad.<br>Press P to store the set value.<br>(Default 50, set range 0 - 99) |

* The set value is changed only, and printing is not performed.



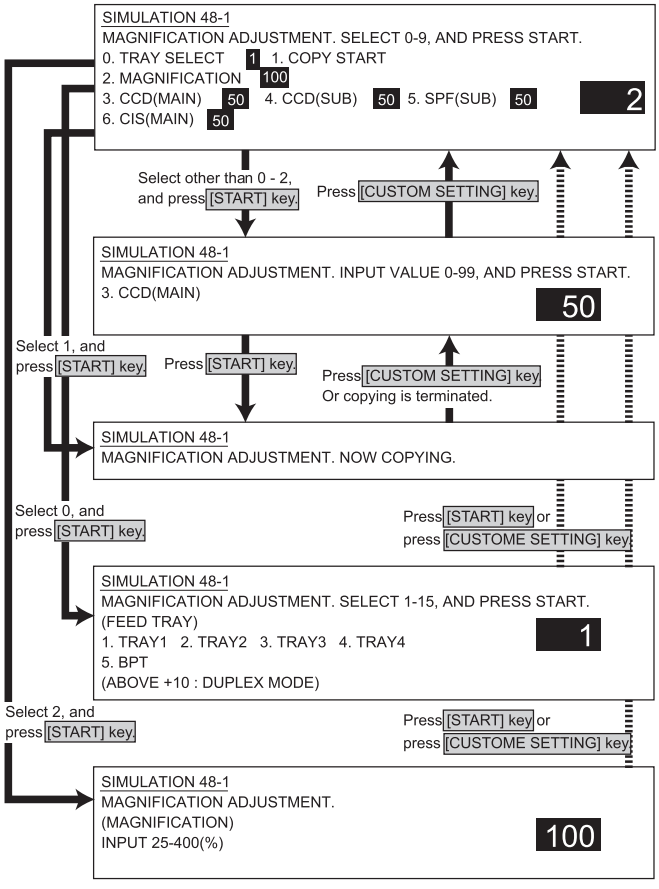

**<Set value>**

| | |
|---|---|
| 0 | Auto |
| 1 | Bright |
| 2 | Dark |
| 3 | Auto (half tone) |
| 4 | Bright (Half tone) |
| 5 | Dark (Half tone) |

**Main code 48**

## 48-1

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the copy magnification ratio (main scan direction, sub scan direction). |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | Perform the magnification ratio correction.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>(Default 50, set range 0 - 99)<br>3) The greater the set value is, the greater the correction is.<br>1 step : 0.1% adjustment<br>4) Press START to start copying and store the set value. (Display value: 1)<br>5) Select the paper feed tray. (Set value : 2)<br>6) Set the scan magnification ratio.<br>(Set value: 3) |


SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. CCD(MAIN) 50 4. CCD(SUB) 50 5. SPF(SUB) 50
6. CIS(MAIN) 50
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
3. CCD(MAIN)
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 48-1
MAGNIFICATION ADJUSTMENT. SELECT 1-15, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE +10 : DUPLEX MODE)
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 48-1
MAGNIFICATION ADJUSTMENT.
(MAGNIFICATION)
INPUT 25-400(%)
100

**<List of set values 1>**

| | |
|---|---|
| 0 | Paper feed tray selection |
| 1 | Copy start (Default) |
| 2 | Print magnification ratio |
| 3 | Main scan magnification ratio (CCD) |
| 4 | Sub scan magnification ratio (CCD) |
| 5 | SPF surface magnification ratio (sub scan) |
| 6 | SPF back magnification ratio (CIS main scan) |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

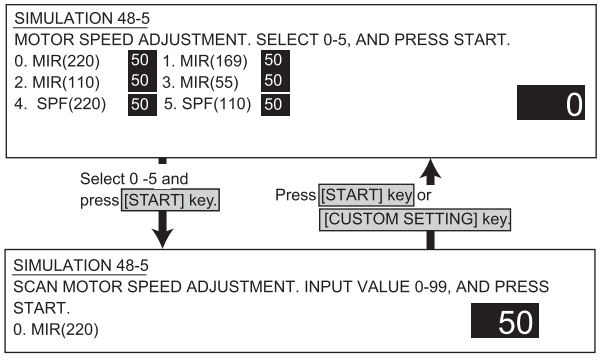
* Above + 10 becomes the duplex mode (DD), making duplex copy.

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 400% |

## 48-5

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the exposure motor speed. |
| Section | Scanner (reading) |
| Item | Picture quality |
| Operation/Procedure | 1) The current set value is displayed on the right of each item.<br>2) Set the exposure level with 10 digit key pad.<br>3) Press START to store the set value.<br>(Default 50, set range 0 - 99) |


SIMULATION 48-5
MOTOR SPEED ADJUSTMENT. SELECT 0-5, AND PRESS START.
0. MIR(220) 50 1. MIR(169) 50
2. MIR(110) 50 3. MIR(55) 50
4. SPF(220) 50 5. SPF(110) 50
0
Select 0 -5 and press [START] key.
Press [START] key or [CUSTOM SETTING] key.
SIMULATION 48-5
SCAN MOTOR SPEED ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
0. MIR(220)
50

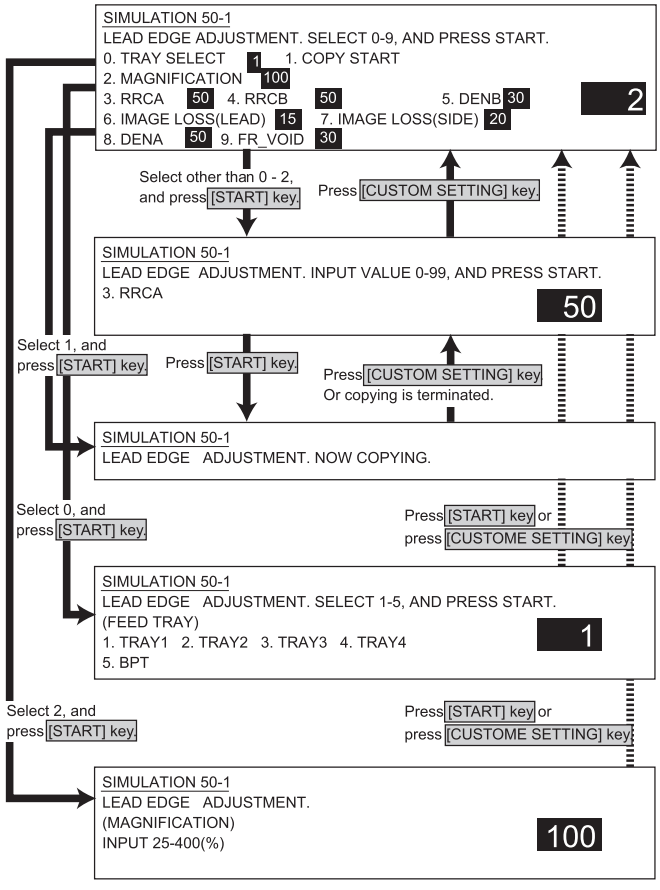
**<List of display values>**

| | |
|---|---|
| 0 | Mirror motor (220mm/sec) |
| 1 | Mirror motor (168.7mm) |
| 2 | Mirror motor (110mm/sec) |
| 3 | Mirror motor (55mm/sec) |
| 4 | SPF motor (220mm/sec) |
| 5 | SPF motor (110mm/sec) |

**Main code 50**

## 50-1

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the copy image position and the void area (image loss) on print paper in the copy mode. (A similar adjustment can be made with SIM 50-2 (simple method).) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | Perform the copy lead edge adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) Press START to start copying and store the set value. (Display value: 1)<br>4) Set the scan magnification ratio. (Set value: 3) |


SIMULATION 50-1
LEAD EDGE ADJUSTMENT. SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. RRCA 50 4. RRCB 50 5. DENB 30
6. IMAGE LOSS(LEAD) 15 7. IMAGE LOSS(SIDE) 20
8. DENA 50 9. FR_VOID 30
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-1
LEAD EDGE ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
3. RRCA
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 50-1
LEAD EDGE ADJUSTMENT. NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-1
LEAD EDGE ADJUSTMENT. SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-1
LEAD EDGE ADJUSTMENT.
(MAGNIFICATION)
INPUT 25-400(%)
100

**<List of set values 1>**

| | | | Default | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | - |
| 2 | MAGNIFICATION | Print magnification ratio setup | - | 25 ~ 400 |
| 3 | RRCA | Document scan start position adjustment | 50 | 0 ~ 99 |
| 4 | RRCB | Resist roller clutch ON timing adjustment value | 50 | 0 ~ 99 |
| 5 | DENB | Rear edge void quantity adjustment value | 35 | 0 ~ 99 |
| 6 | IMAGE LOSS(LEAD) | Lead edge image loss quantity set value | 15 | 0 ~ 99 |
| 7 | IMAGE LOSS(SIDE) | Side image loss quantity set value | 20 | 0 ~ 99 |
| 8 | DENA | Lead edge void quantity set value | 35 | 0 ~ 99 |
| 9 | FR_VOIDFR | Void quantity adjustment value | 35 | 0 ~ 99 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

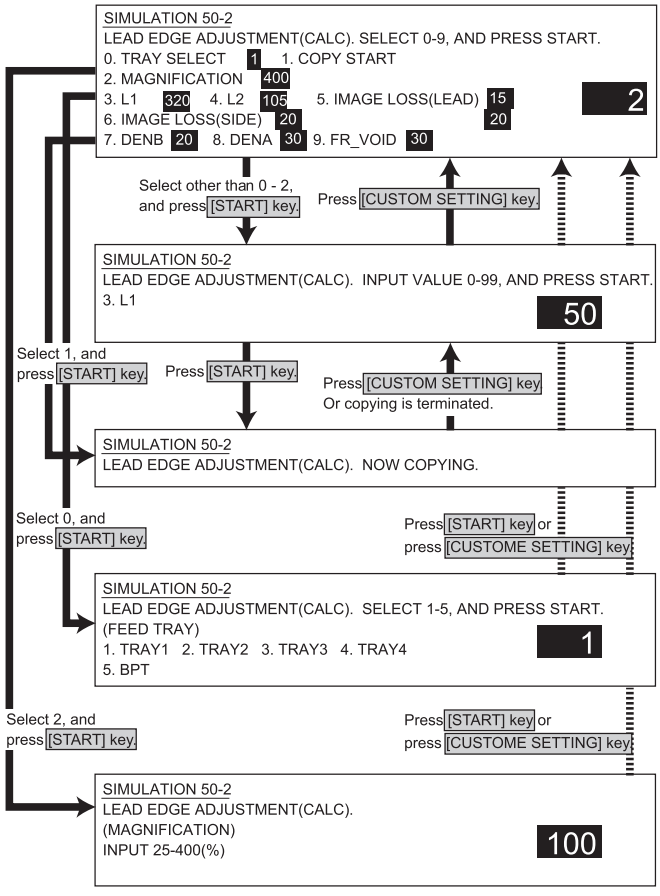
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 400% |

## 50-2

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the copy image position and the void area (image loss) on print paper in the copy mode.<br>(This simulation is a simpler procedure compared the similar adjustment using SIM 50-1.) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | Perform the copy lead edge adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) Press START to start copying and store the set value. (Display value: 1)<br>4) Set the scan magnification ratio.<br>(Set value: 3) |


SIMULATION 50-2
LEAD EDGE ADJUSTMENT(CALC). SELECT 0-9, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 400
3. L1 320 4. L2 105 5. IMAGE LOSS(LEAD) 15
6. IMAGE LOSS(SIDE) 20 20
7. DENB 20 8. DENA 30 9. FR_VOID 30
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-2
LEAD EDGE ADJUSTMENT(CALC). INPUT VALUE 0-99, AND PRESS START.
3. L1
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 50-2
LEAD EDGE ADJUSTMENT(CALC). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-2
LEAD EDGE ADJUSTMENT(CALC). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-2
LEAD EDGE ADJUSTMENT(CALC).
(MAGNIFICATION)
INPUT 25-400(%)
100

**<List of set values 1>**

| | | | Default | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | |
| 2 | MAGNIFICATION | Print magnification ratio setup | - | 25 ~ 400 |
| 3 | L1 | Document scan start position adjustment | - | 0 ~ 999 |
| 4 | L2 | Resist roller clutch ON timing adjustment value | - | 0 ~ 999 |
| 5 | IMAGE LOSS (LEAD) | Rear edge void quantity adjustment value | 15 | 0 ~ 99 |
| 6 | IMAGE LOSS (SIDE) | Lead edge image loss quantity set value | 20 | 0 ~ 99 |
| 7 | DENB | Side image loss quantity set value | 35 | 0 ~ 99 |
| 8 | DENA | Lead edge void quantity set value | 35 | 0 ~ 99 |
| 9 | FR_VOIDFR | Void quantity adjustment value | 35 | 0 ~ 99 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

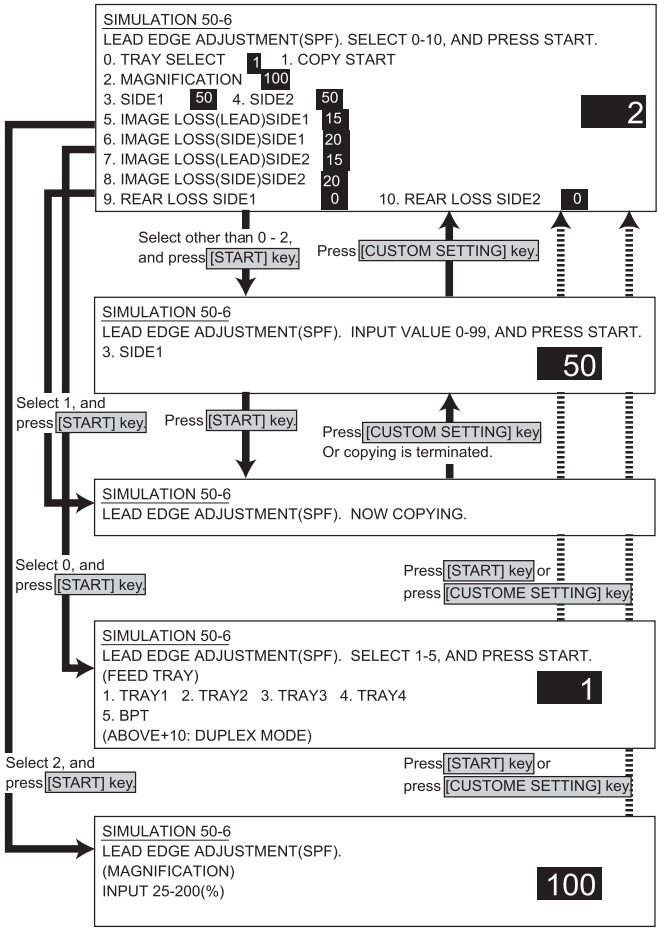
| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 400% |

## 50-6

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Copy lead edge adjustment (DSPF) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | Perform the SPF copy lead edge adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) Press START to start copying and store the set value. (Display value: 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Set the scan magnification ratio. (Set value: 3) |


SIMULATION 50-6
LEAD EDGE ADJUSTMENT(SPF). SELECT 0-10, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. SIDE1 50 4. SIDE2 50
5. IMAGE LOSS(LEAD)SIDE1 15
6. IMAGE LOSS(SIDE)SIDE1 20
7. IMAGE LOSS(LEAD)SIDE2 15
8. IMAGE LOSS(SIDE)SIDE2 20
9. REAR LOSS SIDE1 0
10. REAR LOSS SIDE2 0
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-6
LEAD EDGE ADJUSTMENT(SPF). INPUT VALUE 0-99, AND PRESS START.
3. SIDE1
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key.
Or copying is terminated.
SIMULATION 50-6
LEAD EDGE ADJUSTMENT(SPF). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-6
LEAD EDGE ADJUSTMENT(SPF). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE+10: DUPLEX MODE)
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-6
LEAD EDGE ADJUSTMENT(SPF).
(MAGNIFICATION)
INPUT 25-200(%)
100

**<List of set values 1>**

| | | | Defauult | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | - |
| 2 | MAGNIFICATION | Print magnification ratio setup (25 - 400%) | - | 25 ~ 200 |
| 3 | SIDE 1 | Document front scan start position adjustment | 50 | 0 ~ 99 |
| 4 | SIDE 2 | Document back scan start position adjustment | 50 | 0 ~ 99 |
| 5 | IMAGE LOSS (LEAD) SIDE 1 | Front lead edge image loss set value | 15 | 0 ~ 99 |
| 6 | IMAGE LOSS (SIDE) SIDE 1 | Front side image loss set value | 20 | 0 ~ 99 |
| 7 | IMAGE LOSS (LEAD) SIDE 2 | Back lead edge image loss set value | 15 | 0 ~ 99 |
| 8 | IMAGE LOSS (SIDE) SIDE 2 | Back side image loss set value | 20 | 0 ~ 99 |
| 9 | REAR LOSS SIDE1 | Front rear edge image loss set value | 0 | 0 ~ 20 |
| 10 | REAR LOSS SIDE2 | Back rear edge image loss set value | 0 | 0 ~ 20 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

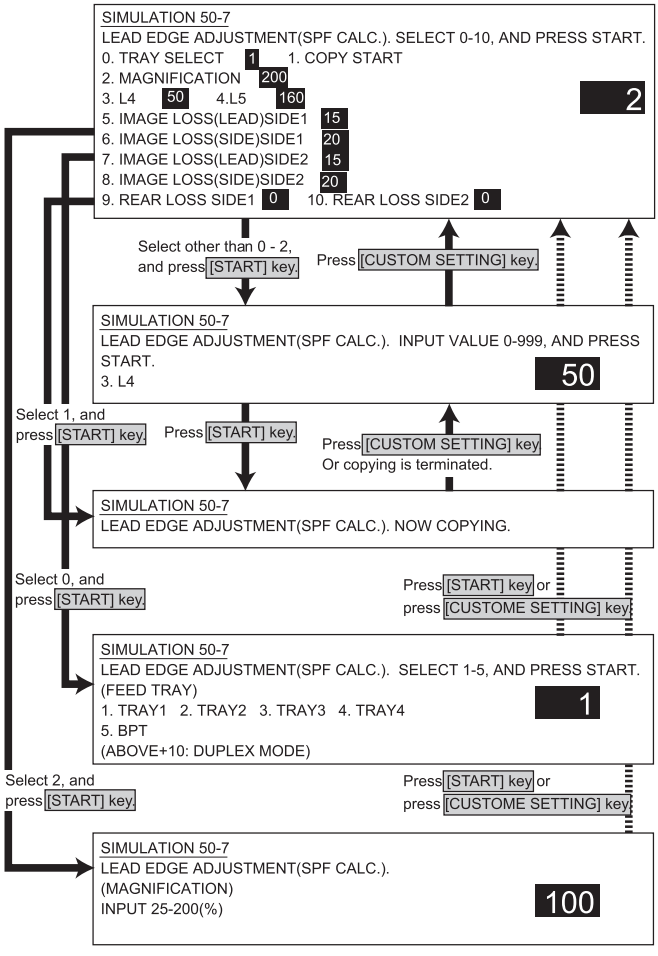
| | | | |
|---|---|---|---|
| 1 | TRAY1 | 11 | TRAY1 with Duplex |
| 2 | TRAY2 | 12 | TRAY2 with Duplex |
| 3 | TRAY3 | 13 | TRAY3 with Duplex |
| 4 | TRAY4 | 14 | TRAY4 with Duplex |
| 5 | Manual feed | 15 | Manual feed with Duplex |

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 200% |

## 50-7

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Copy lead edge adjustment (Simple method) (DSPF) |
| Section | |
| Item | Picture quality |
| Operation/Procedure | Perform the SPF copy lead edge adjustment. (Simple method)<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) Press START to start copying and store the set value. (Display value: 1)<br>4) Select a paper feed tray. (Set value 2)<br>5) Set the scan magnification ratio. (Set value: 3) |


SIMULATION 50-7
LEAD EDGE ADJUSTMENT(SPF CALC.). SELECT 0-10, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 200
3. L4 50 4.L5 160
5. IMAGE LOSS(LEAD)SIDE1 15
6. IMAGE LOSS(SIDE)SIDE1 20
7. IMAGE LOSS(LEAD)SIDE2 15
8. IMAGE LOSS(SIDE)SIDE2 20
9. REAR LOSS SIDE1 0 10. REAR LOSS SIDE2 0
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-7
LEAD EDGE ADJUSTMENT(SPF CALC.). INPUT VALUE 0-999, AND PRESS START.
3. L4
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 50-7
LEAD EDGE ADJUSTMENT(SPF CALC.). NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-7
LEAD EDGE ADJUSTMENT(SPF CALC.). SELECT 1-5, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE+10: DUPLEX MODE)
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-7
LEAD EDGE ADJUSTMENT(SPF CALC.).
(MAGNIFICATION)
INPUT 25-200(%)
100

**<List of set values 1>**

| | | | Defauult | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | - |
| 2 | MAGNIFICATION | Print magnification ratio setup (25 - 400%) | 200 | 25 ~ 200 |
| 3 | L4 | Distance from the front lead edge of copy image to the scale of 10mm. (SPF: 200%) | - | 0 ~ 999 |
| 4 | L5 | Distance from the back lead edge of copy image to the scale of 10mm. (SPF: 200%) | - | 0 ~ 999 |
| 5 | IMAGE LOSS (LEAD) SIDE 1 | Front lead edge image loss set value | 15 | 0 ~ 99 |
| 6 | IMAGE LOSS (SIDE) SIDE 1 | Front side image loss set value | 20 | 0 ~ 99 |
| 7 | IMAGE LOSS (LEAD) SIDE 2 | Back lead edge image loss set value | 15 | 0 ~ 99 |
| 8 | IMAGE LOSS (SIDE) SIDE 2 | Back side image loss set value | 20 | 0 ~ 99 |
| 9 | REAR LOSS SIDE1 | Front rear edge image loss set value | 0 | 0 ~ 20 |
| 10 | REAR LOSS SIDE2 | Back rear edge image loss set value | 0 | 0 ~ 20 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

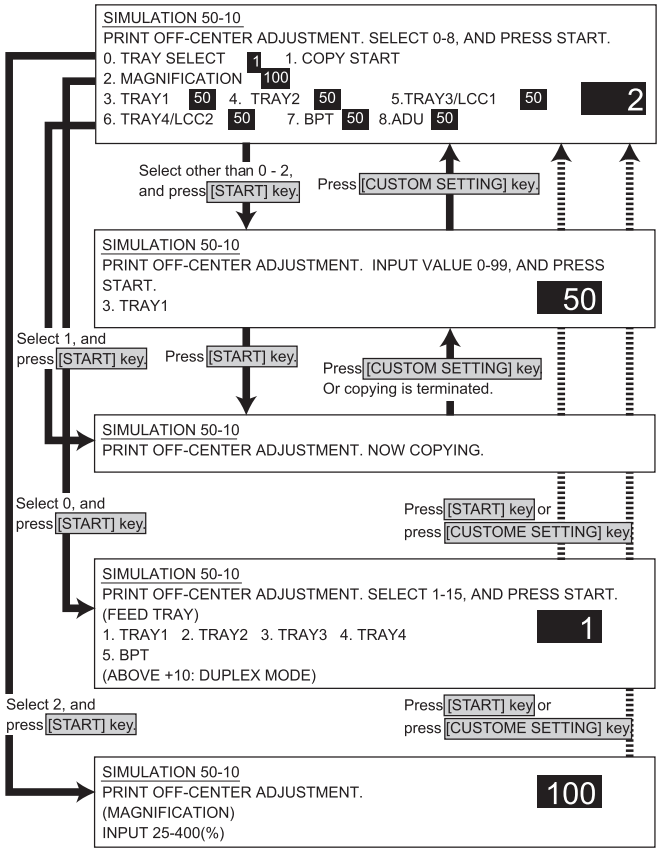
| | | | |
|---|---|---|---|
| 1 | TRAY1 | 11 | TRAY1 with Duplex |
| 2 | TRAY2 | 12 | TRAY2 with Duplex |
| 3 | TRAY3 | 13 | TRAY3 with Duplex |
| 4 | TRAY4 | 14 | TRAY4 with Duplex |
| 5 | Manual feed | 15 | Manual feed with Duplex |

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 200% |

## 50-10

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the print image center position. (Adjusted for each paper feed section.) |
| Section | Image process (ICU) |
| Item | Picture quality |
| Operation/Procedure | Perform the print off-center adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) When the value of UNIT:0.1mm/STEP is increased, the image is shifted toward the rear side.<br>4) Press START to start copying and store the set value. (Display value: 1)<br>5) Select a paper feed tray. (Set value 2)<br>6) Set the scan magnification ratio. (Set value: 3) |


SIMULATION 50-10
PRINT OFF-CENTER ADJUSTMENT. SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. TRAY1 50 4. TRAY2 50 5.TRAY3/LCC1 50
6. TRAY4/LCC2 50 7. BPT 50 8.ADU 50
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-10
PRINT OFF-CENTER ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
3. TRAY1
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 50-10
PRINT OFF-CENTER ADJUSTMENT. NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-10
PRINT OFF-CENTER ADJUSTMENT. SELECT 1-15, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE +10: DUPLEX MODE)
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-10
PRINT OFF-CENTER ADJUSTMENT.
(MAGNIFICATION)
INPUT 25-400(%)
100

**<List of set values 1>**

| | | | Default | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | |
| 2 | MAGNIFICATION | Print magnification ratio setup (25 - 400%) | 100 | 25 ~ 400 |
| 3 | TRAY 1 | Tray 1 adjustment | 50 | 0 ~ 99 |
| 4 | TRAY2 | Tray 2 adjustment | 50 | 0 ~ 99 |
| 5 | TRAY3 | Tray 3 adjustment | 50 | 0 ~ 99 |
| 6 | TRAY4 | Tray 4 adjustment | 50 | 0 ~ 99 |
| 7 | BPT | Manual feed tray adjustment | 50 | 0 ~ 99 |
| 8 | ADU | Adjustment in refeed from ADU | 50 | 0 ~ 99 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3/LCC1 |
| 4 | TRAY4/LCC2 |
| 5 | Manual feed |

* The selected tray is registered as an initial set value in the initial screen.
At the above value + 10, the SPF enters the duplex mode (DD), making duplex copies.

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 400% |

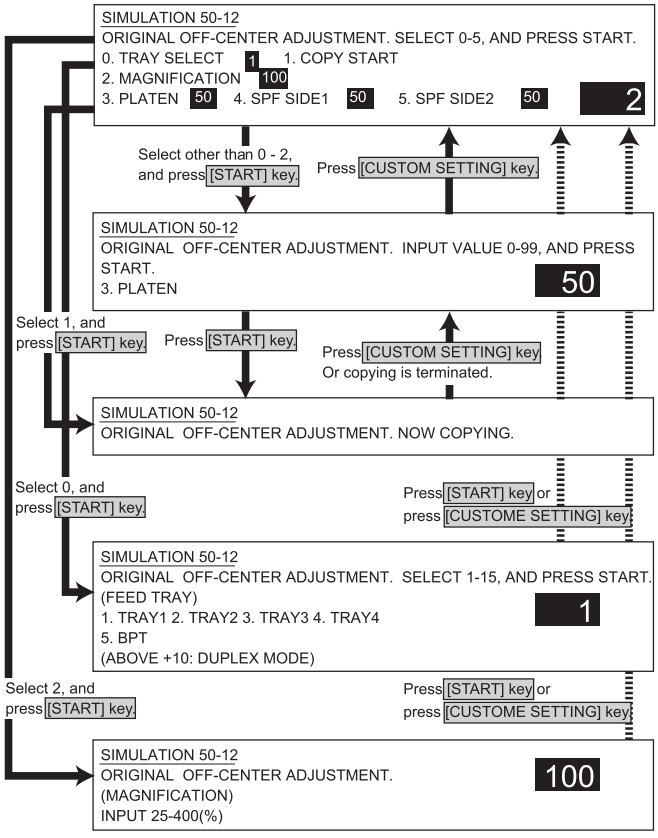
**(Adjustment procedure)**

1) Select a paper feed tray to be used in the adjustment, set the magnification ratio, and enter the adjustment item.
2) After entering the adjustment value, press START, and printing is started.
3) Check the off-center (distance from the paper edge) of the copy. Repeat procedure 2) until a satisfactory result is obtained.

Note: When adjusting the off-center of LCC1, set only the left tray of LCC. When adjusting the off-center of LCC2, set only the right tray of LCC. This is because there is no distinction between right and left in selection of a tray.

## 50-12

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the reading image center position. (Adjusted for each document mode.) |
| Section | Image process (ICU) |
| Item | Picture quality |
| Operation/Procedure | Perform the document print off-center adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) When the value of UNIT:0.1mm/STEP is increased, the image is shifted toward the front side.<br>4) Press START to start copying and store the set value. (Display value: 1)<br>5) Select a paper feed tray. (Set value 2)<br>6) Set the scan magnification ratio. (Set value: 3) |


SIMULATION 50-12
ORIGINAL OFF-CENTER ADJUSTMENT. SELECT 0-5, AND PRESS START.
0. TRAY SELECT 1 1. COPY START
2. MAGNIFICATION 100
3. PLATEN 50 4. SPF SIDE1 50 5. SPF SIDE2 50
2
Select other than 0 - 2, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 50-12
ORIGINAL OFF-CENTER ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
3. PLATEN
50
Select 1, and press [START] key.
Press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 50-12
ORIGINAL OFF-CENTER ADJUSTMENT. NOW COPYING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-12
ORIGINAL OFF-CENTER ADJUSTMENT. SELECT 1-15, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE +10: DUPLEX MODE)
1
Select 2, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 50-12
ORIGINAL OFF-CENTER ADJUSTMENT.
(MAGNIFICATION)
INPUT 25-400(%)
100

**<List of set values 1>**

| | | | Default | Set range |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection | - | 1 ~ 5 |
| 1 | COPY START | Copy start (Initial value) | - | |
| 2 | MAGNIFICATION | Print magnification ratio setup (25 - 400%) | 100 | 25 ~ 400 |
| 3 | PLATEN | OC mode adjustment | 50 | 0 ~ 99 |
| 4 | SPF SIDE1 SPF | Front surface adjustment | 50 | 0 ~ 99 |
| 5 | SPF SIDE2 SPF | Back surface adjustment | 50 | 0 ~ 99 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

| | |
|---|---|
| 1 | TRAY1 |
| 2 | TRAY2 |
| 3 | TRAY3 |
| 4 | TRAY4 |
| 5 | Manual feed |

* The selected tray is registered as an initial set value in the initial screen.
At the above value + 10, the SPF enters the duplex mode (DD), making duplex copies.

**<List of set values 3>**

| | |
|---|---|
| Set range | 25 - 400% |

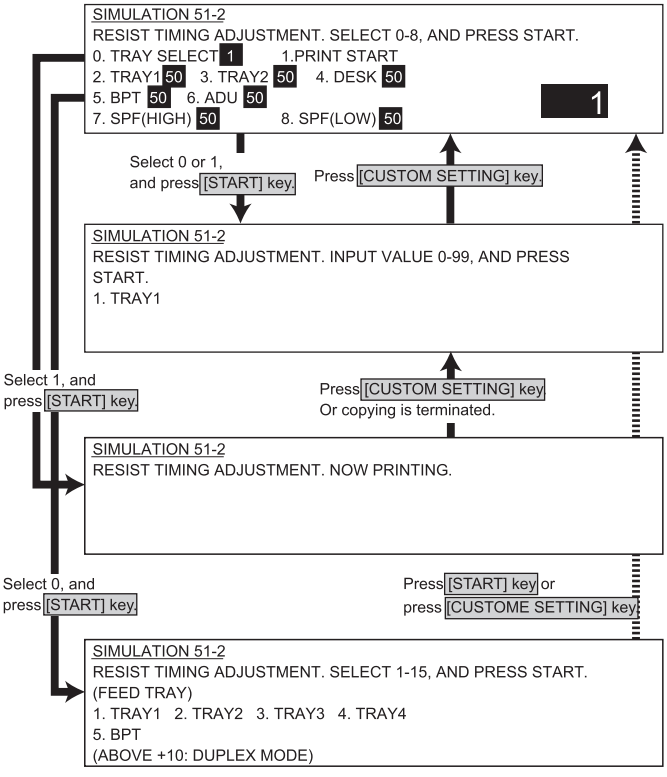
**(Adjustment procedure)**

1) Select a paper feed tray to be used in the adjustment, set the magnification ratio, and enter the adjustment item.
2) After entering the adjustment value, press START, and printing is started.
3) Check the off-center (distance from the paper edge) of the copy. Repeat procedure 2) until a satisfactory result is obtained.

**Main code 51**

## 51-2

| Purpose | Adjustment |
|---|---|
| Function (Content) | Used to adjust the contact pressure of paper on the resist roller in each section (machine paper feed, duplex paper feed, SPF paper feed). (This adjustment is required when the print image position varies or when paper jam occurs frequently.) |
| Section | Paper transport (paper exit, switchback, transport) |
| Item | Operation |
| Operation/Procedure | Perform the resist quantity adjustment.<br>1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1)<br>2) Enter the correction value with 10 digit key pad.<br>Press P to store the set value.<br>3) When the value is increased by 1, the resist quantity is changed by 1ms.<br>4) Press START to start copying and store the set value. (Display value: 1)<br>5) Select a paper feed tray. (Set value 2) |


SIMULATION 51-2
RESIST TIMING ADJUSTMENT. SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1
1.PRINT START
2. TRAY1 50
3. TRAY2 50
4. DESK 50
5. BPT 50
6. ADU 50
7. SPF(HIGH) 50
8. SPF(LOW) 50
1
Select 0 or 1, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
1. TRAY1
Select 1, and press [START] key.
Press [CUSTOM SETTING] key
Or copying is terminated.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. NOW PRINTING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOME SETTING] key.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. SELECT 1-15, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE +10: DUPLEX MODE)

**<List of set values 1>**

| | | | 45PPM | 35PPM |
|---|---|---|---|---|
| 0 | TRAY SELECT | Paper feed tray selection (1 - 5) | | |
| 1 | PRINT START | Copy start (Initial value) | | |
| 2 | TRAY1 | Tray 1 resist adjustment value | 60 | 65 |
| 3 | TRAY2 | Tray 2 resist adjustment value | 50 | 55 |
| 4 | DESK | Desk resist adjustment value | 50 | 55 |
| 5 | BPT | Manual tray resist adjustment value | 55 | 60 |
| 6 | ADU | ADU resist adjustment value | 50 | 55 |
| 7 | SPF(HIGH) | SPF resist adjustment value (High speed) | 50 | 50 |
| 8 | SPF(LOW) | SPF resist adjustment value (Low speed) | 50 | 50 |

**<List of display values 1>**

| | | |
|---|---|---|
| Normal display | | NOW COPYING |
| ERROR display | Door open | DOOR OPEN. |
| | Jam | JAM |
| | Paper empty | PAPER EMPTY. |

**<List of set values 2>**

| | | | |
|---|---|---|---|
| 1 | TRAY1 | 11 | TRAY1 with Duplex |
| 2 | TRAY2 | 12 | TRAY2 with Duplex |
| 3 | TRAY3 | 13 | TRAY3 with Duplex |
| 4 | TRAY4 | 14 | TRAY4 with Duplex |
| 5 | Manual feed | 15 | Manual feed with Duplex |

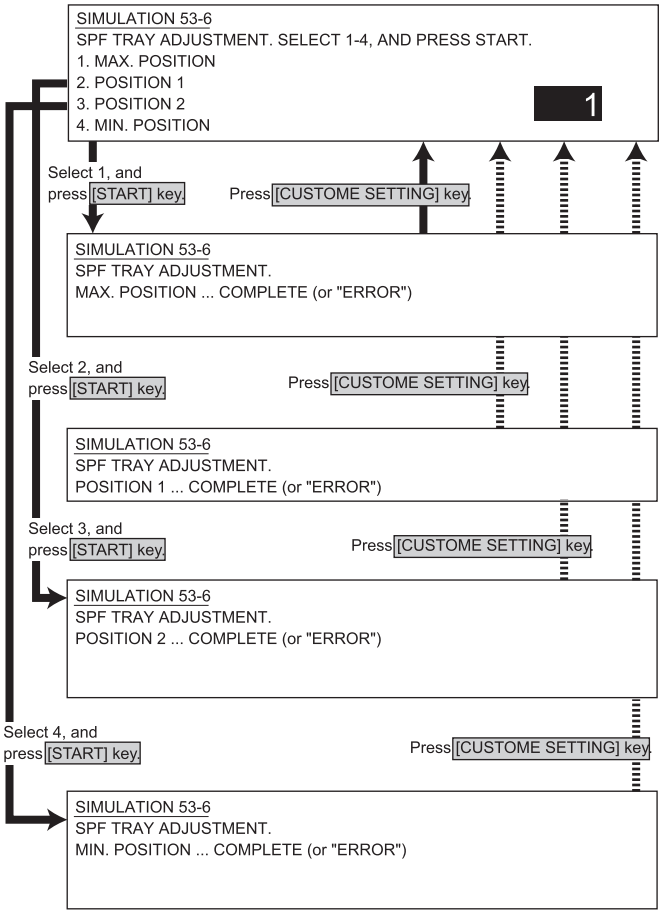
* The selected tray is registered as an initial set value in the initial screen.

**Main code 53**

## 53-6

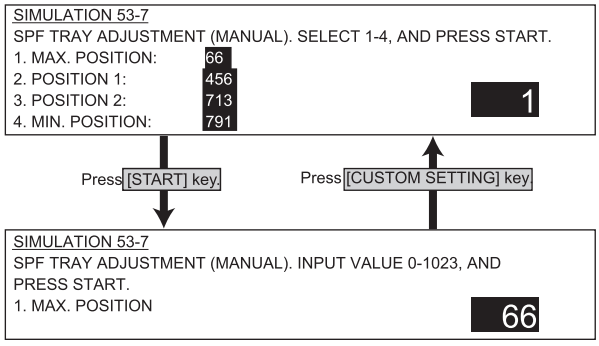
| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the DSPF width detection level. |
| Section | SPF/DSPF |
| Item | Operation |
| Operation/Procedure | Adjust the machine SPF document tray size adjustment.<br>1) Extend the guide to MAX. position, select 1, and press START.<br>When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.<br>2) Move the guide to A4R position, select 2, and press START.<br>When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.<br>3) Move the guide to A5R position, select 3, and press START.<br>When COMPLETE is displayed, press CUSTOM SETTING to return to the initial screen.<br>4) Move the guide to MIN. position, select 4, and press START.<br>When COMPLETE is displayed, the adjustment is completed.<br>If ERROR is displayed in procedures 1) - 4), repeat the adjustment again. |

* This adjustment is performed only when the width detection volume is replaced.
Normally use SIM 53-7 for input.


SIMULATION 53-6
SPF TRAY ADJUSTMENT. SELECT 1-4, AND PRESS START.
1. MAX. POSITION
2. POSITION 1
3. POSITION 2
4. MIN. POSITION
1
Select 1, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
MAX. POSITION ... COMPLETE (or "ERROR")
Select 2, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
POSITION 1 ... COMPLETE (or "ERROR")
Select 3, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
POSITION 2 ... COMPLETE (or "ERROR")
Select 4, and press [START] key.
Press [CUSTOME SETTING] key.
SIMULATION 53-6
SPF TRAY ADJUSTMENT.
MIN. POSITION ... COMPLETE (or "ERROR")

## 53-7

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to enter the adjustment value of SPF width detection. |
| Section | DSPF |
| Item | Operation |
| Operation/Procedure | Enter the adjustment value (indicated on the back of SPF) of SPF document tray size. |



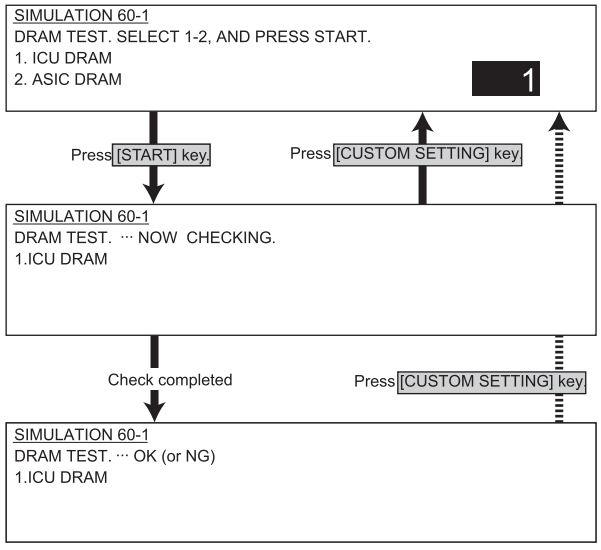

**<List of set values>**

| | | Initial value | Range |
|---|---|---|---|
| 1 | Max. width | 66 | 0 - 1023 |
| 2 | Adjustment point 1 | 456 | |
| 3 | Adjustment point 2 | 713 | |
| 4 | Min. width | 791 | |

**Main code 60**

## 60-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the ICU (DRAM) operation (read/write).<br>(SIMM MEMORY/ON BOARD MEMORY) |
| Section | Image process (ICU) |
| Item | Operation |
| Operation/Procedure | Perform read/write check of the ICU image DRUM. After starting, NOW CHECKING is displayed during checking. When the read/write check is normally completed, OK is displayed. If an error occurs, NG is displayed. |



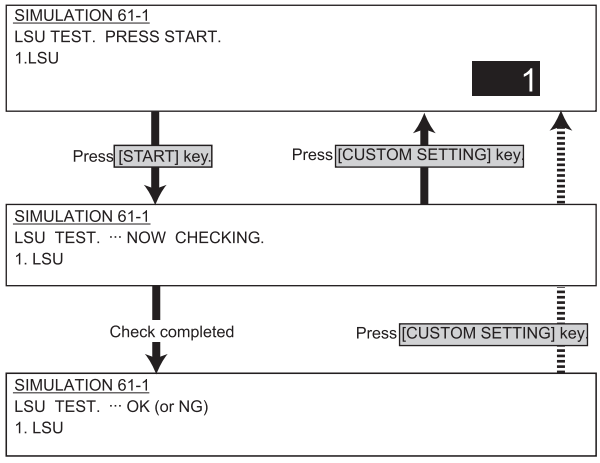

**<List of set values>**

| | | |
|---|---|---|
| 1 | ICU DRAM | Image memory for ERDH |
| 2 | ASIC DRAM | Image memory for ASIC |

**Main code 61**

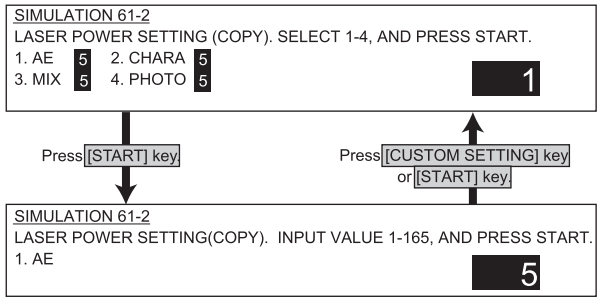
## 61-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the laser scan unit. |
| Section | PCU |
| Item | Operation |
| Operation/Procedure | Check the LSU. Turn on the LSU and check that the sync signal (HSYNC) is delivered or not. After starting, NOW CHECKING is displayed during checking. When the test is normally completed, OK is displayed. When an error occurs, NG is displayed. |




## 61-2

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the laser power (absolute value) in the copy mode. |
| Section | PCU |
| Item | Operation |
| Operation/Procedure | Enter the laser power set value in copying, and press START to store it. |

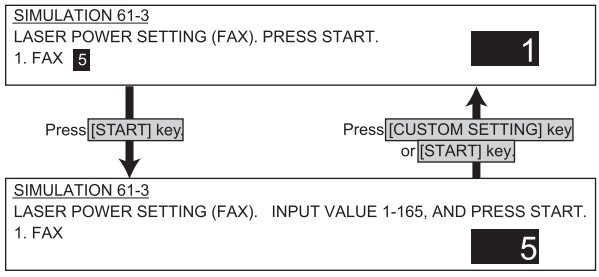



**<List of set values>**

| | | | Initial value | Set range |
|---|---|---|---|---|
| 1 | Auto exposure mode | 45PPM | 104 | 104 - 150 (45PPM)<br>80 - 150 (35PPM) |
| | | 35PPM | 80 | |
| 2 | Text mode | 45PPM | 104 | |
| | | 35PPM | 80 | |
| 3 | Text/Photo mode | 45PPM | 104 | |
| | | 35PPM | 80 | |
| 4 | Photo mode | 45PPM | 104 | |
| | | 35PPM | 80 | |

## 61-3

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the scanner (exposure) laser power (absolute value) in the FAX reception mode. (Only when FAX is installed.) |
| Section | PCU |
| Item | Operation |
| Operation/Procedure | Set the laser power in FAX reception.<br>Enter the set value and press Start to store it. |

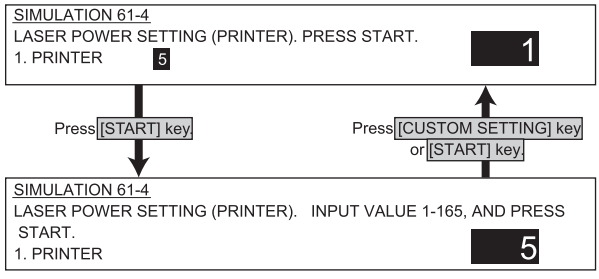



**<List of set values>**

| | | | Initial value | Set range |
|---|---|---|---|---|
| 1 | FAX reception | 45PPM | 104 | 104 - 150 (45PPM)<br>80 - 150 (35PPM) |
| | | 35PPM | 80 | |

## 61-4

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the laser power (absolute value) in the printer mode. |
| Section | PCU |
| Item | |
| Operation/Procedure | Set the laser power value in the printer mode.<br>Enter the value and press START to store it. |



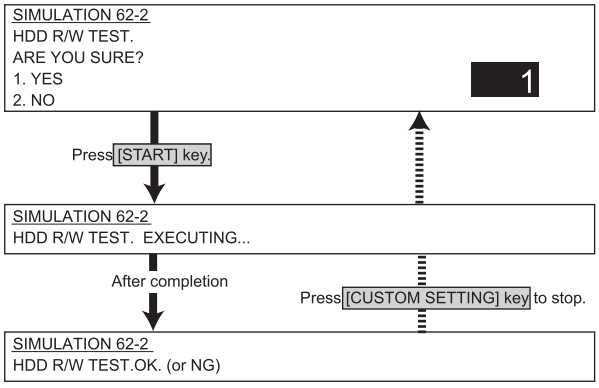

**<List of set values>**

| | | | Initial value | Set range |
|---|---|---|---|---|
| 1 | PRINTER | 45PPM | 104 | 104 - 150 (45PPM)<br>80 - 150 (35PPM) |
| | | 35PPM | 80 | |

**Main code 62**

## 62-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the hard disk operation (read/write).<br>(Only for the model with the hard disk)<br>(Partial check) |
| Section | Memory |
| Item | Operation |
| Operation/Procedure | Perform the partial check of read/write of the hard disk. EXECUTING is displayed during check. When check is normally completed, OK is displayed.<br>When an error occurs, NG is displayed. |

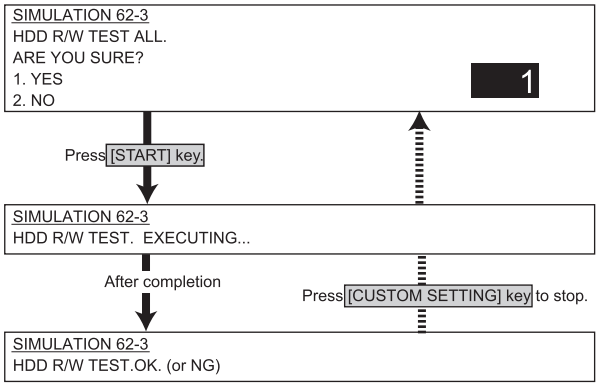



**<List of set values>**

| | |
|---|---|
| 1 | Execution |
| 2 | Cancel |

## 62-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the hard disk operation (read/write).<br>(Only for the model with the hard disk)<br>(All area check) |
| Section | Memory |
| Item | Operation |
| Operation/Procedure | Perform the all area check of read/write of the hard disk. EXECUTING is displayed during check. When check is normally completed, OK is displayed. When an error occurs, NG is displayed. |



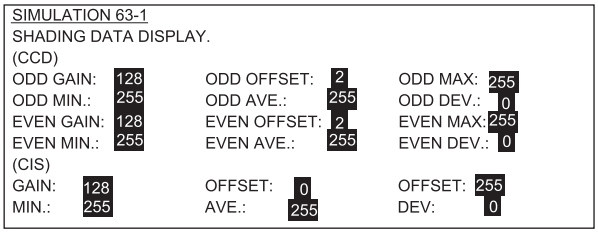

**<List of set values>**

| | |
|---|---|
| 1 | Execution |
| 2 | Cancel |

**Main code 63**

## 63-1

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to check the shading correction result. (The shading correction result is displayed.) |
| Section | Scanner (exposure) |
| Item | Operation |
| Operation/Procedure | The latest shading data are displayed. |

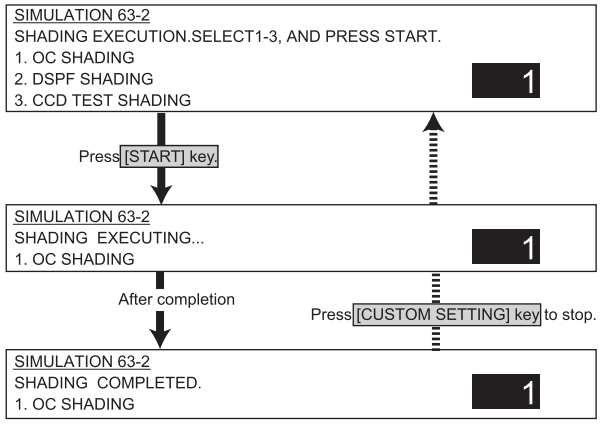



**<Set values>**

| CCD data | |
|---|---|
| Values | Description |
| ODD GAIN | Pixel gain adjustment value |
| EVEN GAIN | Pixel gain adjustment value |
| ODD MAX | Pixel MAX |
| ODD MIN | Pixel MIN |
| ODD AVE | Od pixel average |
| EVEN MAX | Even pixel MAX |
| EVEN MIN | Even pixel MIN |
| EVEN AVE | Even pixel average |
| ODD OFFSET | Black offset |
| EVEN OFFSET | Even offset |
| ODD DEV | Odd standard deviation |
| EVEN DEV | Even standard deviation |
| CIS data : Only when DSPF installed | |
| Values | Description |
| GAIN | Gain adjustment value |
| MAX | Pixel MAX |
| MIN | Pixel MIN |
| AVE | Pixel average |
| OFFSET | Black offset |
| DEV | Standard deviation |

## 63-2

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to execute shading. |
| Section | Scanner (exposure) |
| Item | Operation |
| Operation/Procedure | Execute shading. During shading, EXECUTING is displayed. When shading is completed, COMPLETED is displayed. |

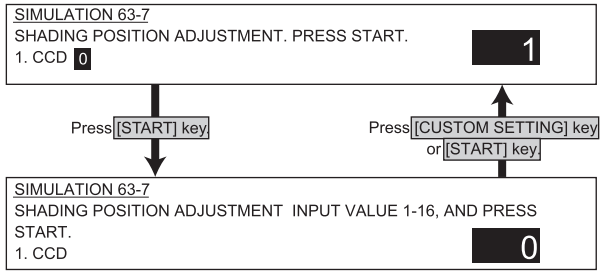



**<List of set values>**

| | |
|---|---|
| 1 | OC analog data correction and shading correction data making |
| 2 | DSPF analog level correction and shading correction data making |
| 3 | Execution of CCD data taking test |

## 63-7

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the white plate scan start position in shading white correction. |
| Section | Scanner (exposure) |
| Item | Operation |
| Operation/Procedure | Adjust the white plate scan start position in shading white correction. Enter the adjustment value and press START to store it. |




**<Set value>**

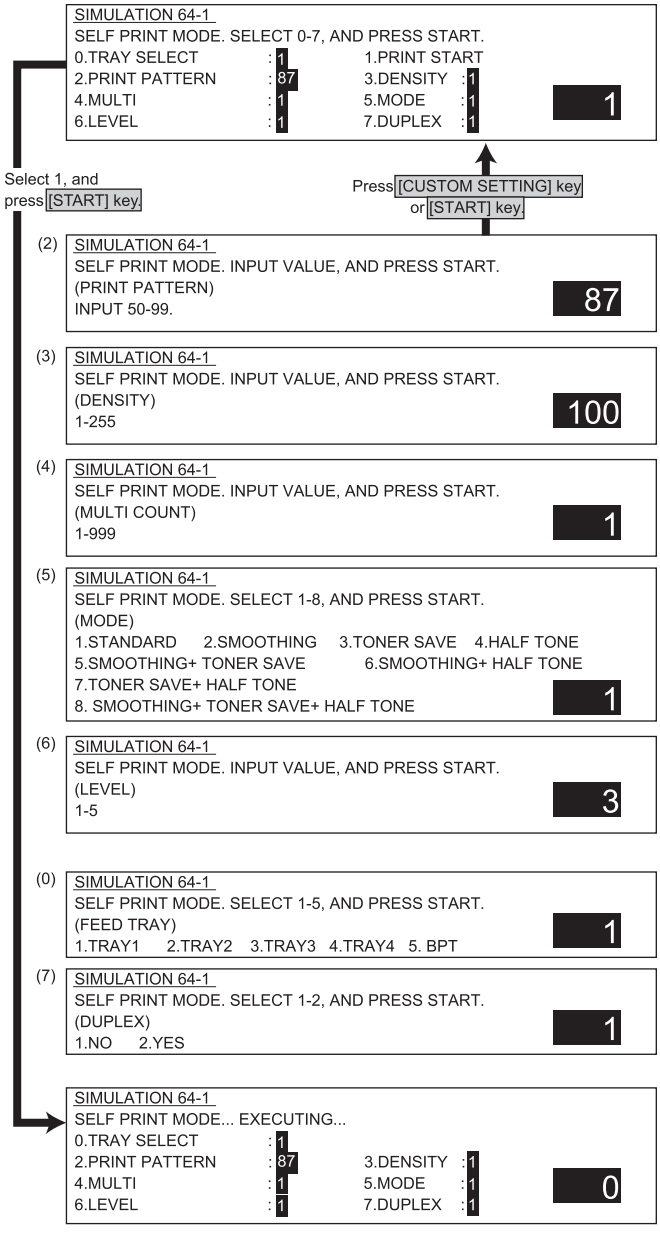
| | | Initial value | Range |
|---|---|---|---|
| 1 | CCD scan | 6 | 1-16 |

(1 count : 0.5 mm)

**Main code 64**

## 64-1

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of the printer section (self printing).<br>(The print pattern, paper feed mode, print mode, print quantity, density can be changed optionally.) |
| Section | Printer |
| Item | Operation |
| Operation/Procedure | Perform self printing. The current set data is displayed on the right side of the menu. |




**<List of set values>**

| | | |
|---|---|---|
| 0 | Paper feed tray | 1: TRAY1<br>2: TRAY2<br>3: TRAY3<br>4: TRAY4:<br>5: MANUAL |
| 1 | Print execution | Print is started with the set data. |
| 2 | Print pattern | Refer to the print pattern. |
| 3 | Picture density | Enable only when No. 79, 80, or 84 is selected. |
| 4 | Print quantity | - |
| 5 | Print mode | 1: Standard<br>2: Smoothing ON<br>3: Toner save ON<br>4: Half tone ON<br>5: Smoothing + Toner save<br>6: Smoothing + Half tone<br>7: Toner save + half tone<br>8: Smoothing + Toner save + Half tone |
| 6 | Print level | 1 ~ 5 |
| 7 | Duplex | 1: Single print<br>2: Duplex print |

**<Print pattern>**

| | | | |
|---|---|---|---|
| 50 | Total surface 1BY1 (Vertical) | 70 | Scaled print adjustment pattern (Vertical) |
| 51 | Total surface 1BY1 (Horizontal) | 71 | Grid pattern |
| 52 | Total surface 1BY2 (Vertical) | 72 | Slant line 45 degrees |
| 53 | Total surface 1BY2 (Horizontal) | 73 | Slant line 26.6 degrees |
| 54 | Total surface 1BY3 (Vertical) | 74 | Slant line 63.4 degrees |
| 55 | Total surface 1BY3 (Horizontal) | 75 | ID-BG pattern |
| 56 | Total surface 1BY4 (Vertical) | 76 | Dot pattern 12.5% |
| 57 | Total surface 1BY4 (Horizontal) | 77 | Dot pattern 28% |
| 58 | Total surface 1BY5 (Vertical) | 78 | Dot pattern 50% |
| 59 | Total surface 1BY5 (Horizontal) | 79 | Whole surface error diffusion background |
| 60 | Total surface 2BY2 (Vertical) | 70 | Whole surface dither process background |
| 61 | Total surface 2BY2 (Horizontal) | 81 | 1 block 128 pixels/ every 32 gradations |
| 62 | Total surface 2BY3 (Vertical) | 82 | 1 block 128 pixels/ every 16 gradations |
| 63 | Total surface 2BY3 (Horizontal) | 83 | 1 block 128 pixels/ every 8 gradations |
| 64 | Whole surface background copy | 84 | Memory check pattern |
| 65 | Special pattern (Vertical) | 85 | Cleaning check pattern |
| 66 | 1 block 128 pixels/ every 32 gradations | 86 | Offset check pattern |
| 67 | 1 block 128 pixels/ every 16 gradations | 87 | Test B image (for aging) |
| 68 | 1 block 128 pixels/ every 8 gradations | 88 | Printer 6% |
| 69 | 11-do t pattern | 89 | Printer 5% |
| | | 98 | List of setup values |

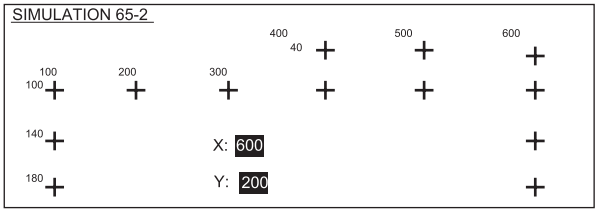
**Main code 65**

## 65-1

| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to adjust the touch panel (LCD display section) detecting position. |
| Section | Operation (display, operation) |
| Item | |
| Operation/Procedure | Adjust the coordinates of the touch panel. Press the four cross marks on the LCD, and the pressed mark will turn gray. When all four marks are pressed, the adjustment is completed. |

## 65-2

| | |
|---|---|
| Purpose | Adjustment, setup, operation data output, check (display, print) |
| Function (Content) | Used to check the result of the touch panel (LCD display section) detecting position adjustment. (The coordinates are displayed.) |
| Section | Operation (display, operation) |
| Item | |
| Operation/Procedure | Check the touch panel. When the touch panel is pressed, the coordinates (dot conversion values) in X/Y directions are displayed. |

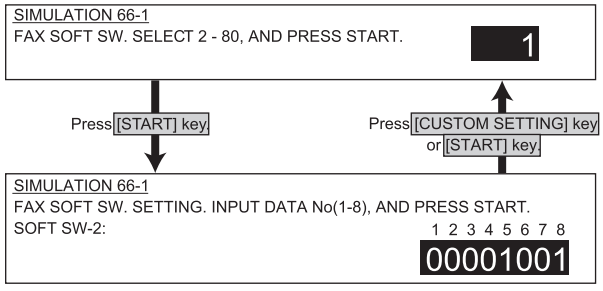



**Main code 66**

## 66-1

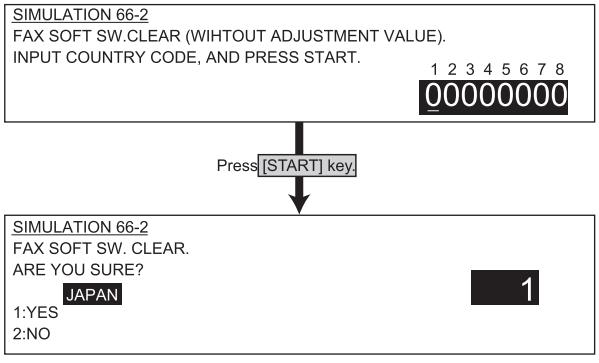
| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to set the FAX soft switch function. (Used to utilize the FAX soft switch function.) |
| Section | Fax |
| Item | |
| Operation/Procedure | Set the Fax soft switch. (For details of the soft SW, refer to the AR-FX5 Service Manual.) Entry of 1 - 8 only is effective. 1) Specify the bit to be changed (highlighted) with a number. 2) Press START to rewrite the setting. |

* SIM 1 cannot be changed with this simulation.


SIMULATION 66-1
FAX SOFT SW. SELECT 2 - 80, AND PRESS START.
1
Press [START] key.
Press [CUSTOM SETTING] key or [START] key.
SIMULATION 66-1
FAX SOFT SW. SETTING. INPUT DATA No(1-8), AND PRESS START.
SOFT SW-2:
1 2 3 4 5 6 7 8
00001001

## 66-2

| | |
|---|---|
| Purpose | Data clear |
| Function (Content) | Used to set the FAX soft switch setup to the default. (Except for the adjustment values) |
| Section | Fax |
| Item | Data |
| Operation/Procedure | The current set value of SW1 is displayed.<br>Entry of 1 - 8 only is effective.<br>1) Specify the bit to be changed (highlighted) with a number.<br>2) Select the country code, and press START to rewrite the setting.<br>3) Select a number (1 - 2) with 10 digit key pad and press START to execute.<br>1: FAX soft SW clear 2: Not clear<br>4) The soft switch (excluding the FAX adjustment value) corresponding to the selected country code is cleared.<br>5) The selected country is highlighted. |




**<Country codes>**

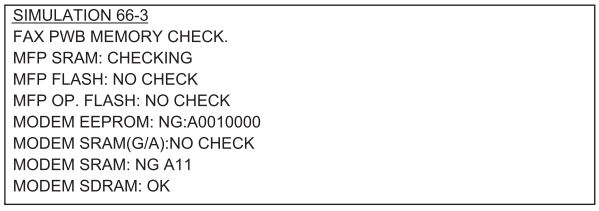
| | |
|---|---|
| Japan | 0 |
| U.S.A. | 10110101 |
| Australia | 1001 |
| U.K | 10110100 |
| France | 111101 |
| Germany | 100 |
| Canada | 100000 |
| Netherlands | 1111011 |

* The codes other than the above are recognized as Japan.

* Conforms to Advisory Document T.35.

## 66-3

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of FAX PWB memory (read/write).<br>(This adjustment is required when replacing the PWB with a new one.) |
| Section | Fax |
| Item | Data |
| Operation/Procedure | Check the FAX PWB memory.<br>When this simulation is executed, the error occurring address or the data line is displayed. |




**<List of display values>**

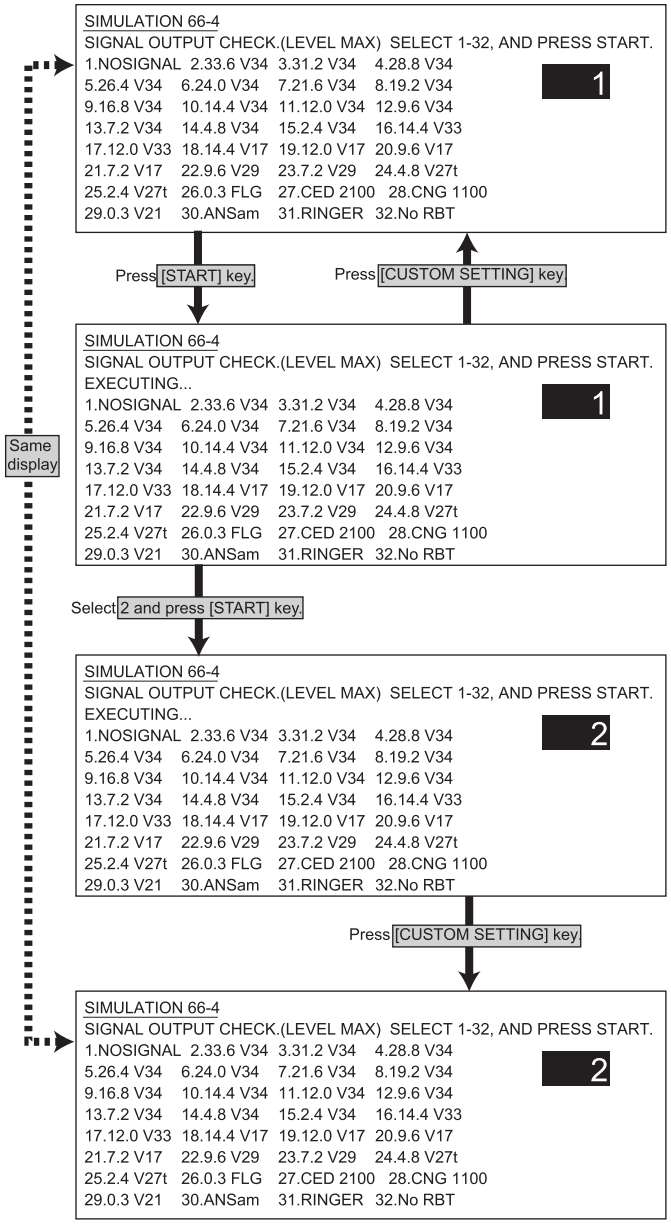
| | |
|---|---|
| NO CHECK | Not checked |
| CHECKING | Checking |
| OK | Check complete OK |
| NG | Check error |

**<Items>**

| | |
|---|---|
| MFP SRAM (MFP control PWB) | SRAM |
| MFP FLASH (FAX I/F PWB) | FLASH Memory (AR-MM9) |
| MFP OP.FLASH (FAX I/F PWB) | |
| MODEM EEPROM (FAX PWB) | |
| MODEM SRAM(G/A) (FAX PWB) | |
| MODEM SRAM (FAX PWB) | |
| MODEM SDRAM (FAX PWB) | |

## 66-4

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation of data signal output in the FAX data output mode.<br>(Used to check the MODEM operation.)<br>Send level 0db (Max.)<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | Signal output check (level Max.)<br>When CUSTOM SETTING is pressed during execution of this simulation, execution is stopped.<br>Enter a number and press START to change the signal. |

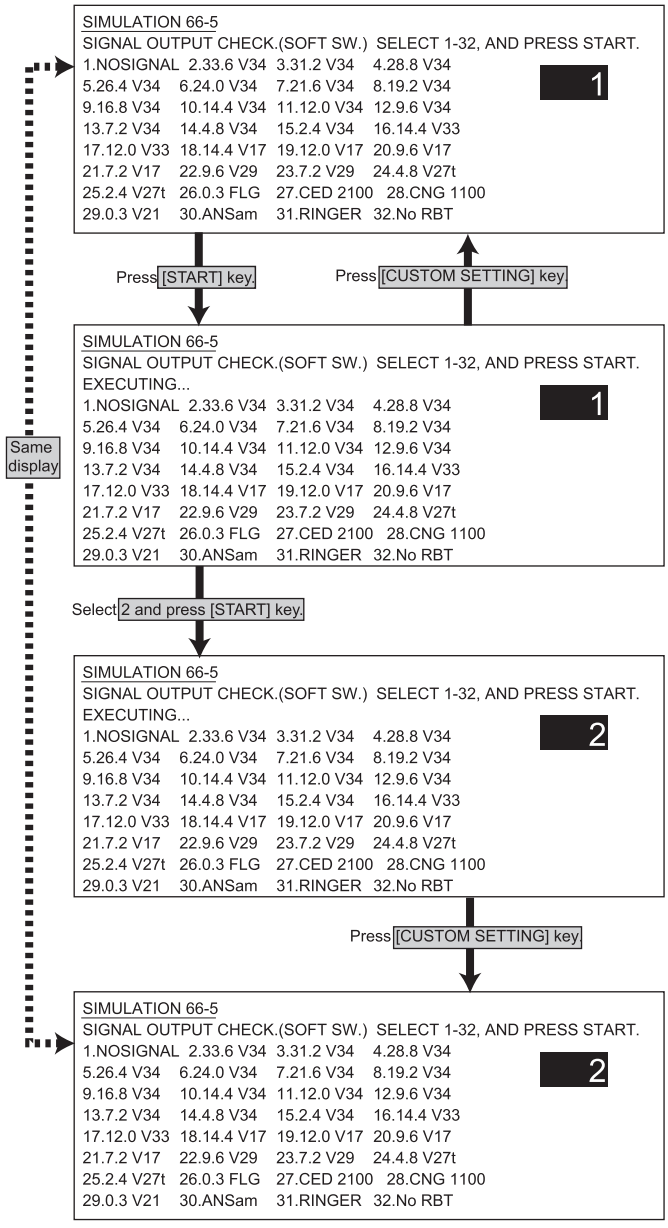



**<List of set values>**

| | | | |
|---|---|---|---|
| 1 | No signal | 17 | 12.0 V33 |
| 2 | 33.6 V34 | 18 | 14.4 V17 |
| 3 | 31.2 V34 | 19 | 12.0 V17 |
| 4 | 28.8 V34 | 20 | 9.6 V17 |
| 5 | 26.4 V34 | 21 | 7.2 V17 |
| 6 | 24.0 V34 | 22 | 9.6 V29 |
| 7 | 21.6 V34 | 23 | 7.2 V29 |
| 8 | 19.2 V34 | 24 | 4.8 V27t |
| 9 | 16.8 V34 | 25 | 2.4 V27t |
| 10 | 14.4 V34 | 26 | 0.3 FLG |
| 11 | 12.0 V34 | 27 | CED2100 |
| 12 | 9.6 V34 | 28 | CNG1100 |
| 13 | 7.2 V34 | 29 | 0.3 V21 |
| 14 | 4.8 V34 | 30 | ANSam |
| 15 | 2.4 V34 | 31 | RINGER |
| 16 | 14.4 V33 | 32 | No RBT |

## 66-5

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operations of data signal output in the FAX data output mode. (Used to check the MODEM operation.) Signals are sent in the send level set with the soft switch. (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | Signal output check (Send level is set with the soft SW.) When CUSTOM SETTING is pressed during execution of this simulation, execution is stopped. Enter a number and press START to change the kind of signal. |

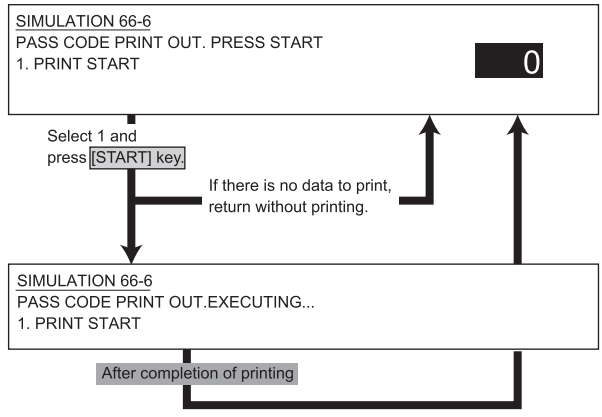



**<List of set values>**

| | | | |
|---|---|---|---|
| 1 | No signal | 17 | 12.0 V33 |
| 2 | 33.6 V34 | 18 | 14.4 V17 |
| 3 | 31.2 V34 | 19 | 12.0 V17 |
| 4 | 28.8 V34 | 20 | 9.6 V17 |
| 5 | 26.4 V34 | 21 | 7.2 V17 |
| 6 | 24.0 V34 | 22 | 9.6 V29 |
| 7 | 21.6 V34 | 23 | 7.2 V29 |
| 8 | 19.2 V34 | 24 | 4.8 V27t |
| 9 | 16.8 V34 | 25 | 2.4 V27t |
| 10 | 14.4 V34 | 26 | 0.3 FLG |
| 11 | 12.0 V34 | 27 | CED2100 |
| 12 | 9.6 V34 | 28 | CNG1100 |
| 13 | 7.2 V34 | 29 | 0.3 V21 |
| 14 | 4.8 V34 | 30 | ANSam |
| 15 | 2.4 V34 | 31 | RINGER |
| 16 | 14.4 V33 | 32 | No RBT |

## 66-6

| | |
|---|---|
| Purpose | User data output, check (display, print) |
| Function (Content) | Used to print the confidential password. (Used when the confidential password is forgotten.) (Only when FAX is installed.) |
| Section | Fax |
| Item | Data |
| Operation/Procedure | The confidential pass code is printed.<br>1) The currently selected data is displayed on the side of menu.<br>2) The paper size is automatically selected by the size stored in the image memory. |

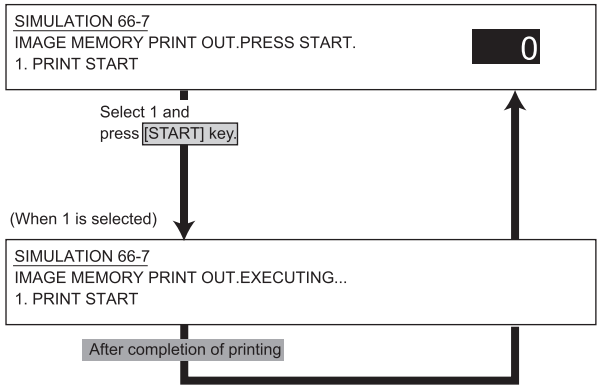

SIMULATION 66-6
PASS CODE PRINT OUT. PRESS START
1. PRINT START
0
Select 1 and press [START] key.
If there is no data to print, return without printing.
SIMULATION 66-6
PASS CODE PRINT OUT.EXECUTING...
1. PRINT START
After completion of printing

**<Set value>**

| | |
|---|---|
| 1 | Print start |

## 66-7

| | |
|---|---|
| Purpose | User data output, check (display, print) |
| Function (Content) | Used to print the image memory data (memory send, receive). (Only when FAX is installed. |
| Section | Fax |
| Item | Data |
| Operation/Procedure | The content of image memory is printed. The paper size is automatically selected with the paper size stored in the image memory. |

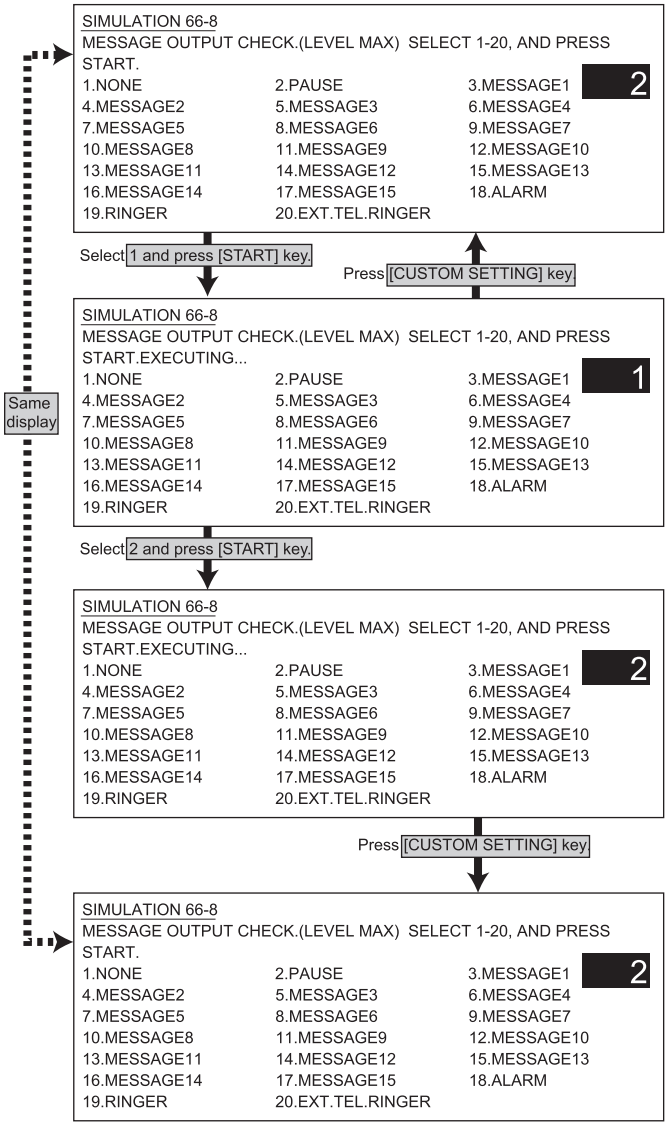



**<Set value>**

| | |
|---|---|
| 1 | Print start |

## 66-8

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the output operation of the FAX sound signals. (Sound output IC operation check) Send level 0dB (Max.) (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | A voice message is outputted. (Level 0) Enter a number during execution to change the signal. Press START to start sending a voice message. Press CUSTOMSETTING to terminate. |

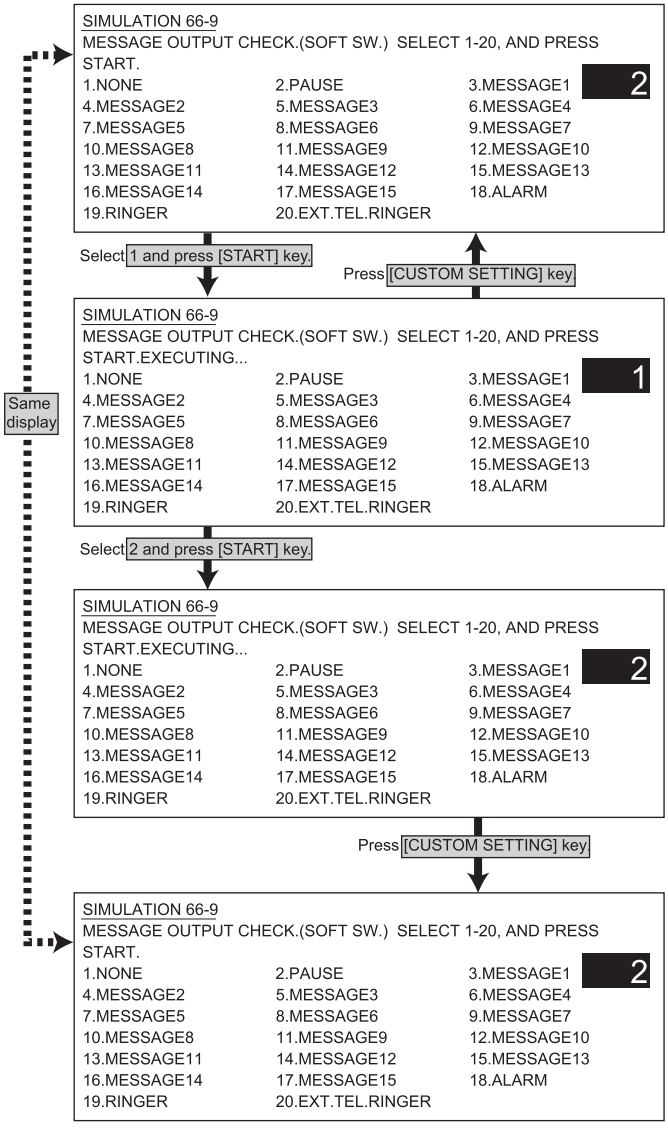



**<List of set values>**

| | | |
|---|---|---|
| 1 | NONE | NONE |
| 2 | PAUSE | PAUSE |
| 3 | MESSAGE1 | MESSAGE1 |
| 4 | MESSAGE2 | MESSAGE2 |
| 5 | MESSAGE3 | MESSAGE3 |
| 6 | MESSAGE4 | MESSAGE4 |
| 7 | MESSAGE5 | MESSAGE5 |
| 8 | MESSAGE6 | MESSAGE6 |
| 9 | MESSAGE7 | MESSAGE7 |
| 10 | MESSAGE8 | MESSAGE8 |
| 11 | MESSAGE9 | MESSAGE9 |
| 12 | MESSAGE10 | MESSAGE10 |
| 13 | MESSAGE11 | MESSAGE11 |
| 14 | MESSAGE12 | MESSAGE12 |
| 15 | MESSAGE13 | MESSAGE13 |
| 16 | MESSAGE14 | MESSAGE14 |
| 17 | MESSAGE15 | MESSAGE15 |
| 18 | ALARM | ALARM |
| 19 | RINGER | RINGER |
| 20 | EXT.TEL.RINGER | EXT.TEL.RINGER |

## 66-9

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the output operation of the FAX sound signals.<br>(Sound output IC operation check)<br>(Only when FAX is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | A voice message is outputted.<br>(Send level is set with SW.)<br>Enter a number during execution to change the signal.<br>Press START to start sending a voice message.<br>Press CUSTOMSETTING to terminate. |




**<List of set values>**

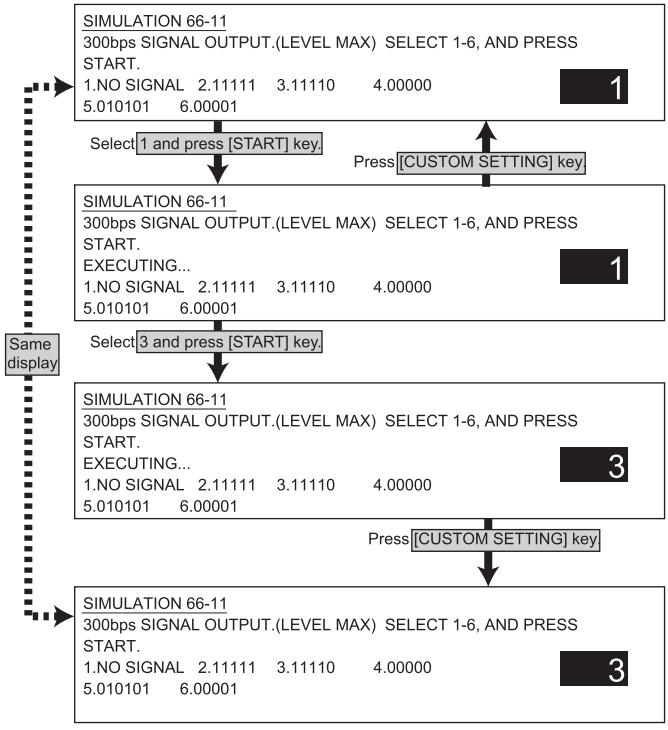
| | | |
|---|---|---|
| 1 | NONE | NONE |
| 2 | PAUSE | PAUSE |
| 3 | MESSAGE1 | MESSAGE1 |
| 4 | MESSAGE2 | MESSAGE2 |
| 5 | MESSAGE3 | MESSAGE3 |
| 6 | MESSAGE4 | MESSAGE4 |
| 7 | MESSAGE5 | MESSAGE5 |
| 8 | MESSAGE6 | MESSAGE6 |
| 9 | MESSAGE7 | MESSAGE7 |
| 10 | MESSAGE8 | MESSAGE8 |
| 11 | MESSAGE9 | MESSAGE9 |
| 12 | MESSAGE10 | MESSAGE10 |
| 13 | MESSAGE11 | MESSAGE11 |
| 14 | MESSAGE12 | MESSAGE12 |
| 15 | MESSAGE13 | MESSAGE13 |
| 16 | MESSAGE14 | MESSAGE14 |
| 17 | MESSAGE15 | MESSAGE15 |
| 18 | ALARM | ALARM |
| 19 | RINGER | RINGER |
| 20 | EXT.TEL.RINGER | EXT.TEL.RINGER |

## 66-10

| | |
|---|---|
| Purpose | User data output, check (display, print) |
| Function (Content) | Used to clear all data of image memory (memory send, receive). Confidential data is also cleared. (Only when FAX is installed.) |
| Section | Fax |
| Item | Data |
| Operation/Procedure | The FAX image memory is cleared.<br>1) Select an item with 10 digit key pad and press START. The following is executed and the display returns to the initial state.<br>1: Image memory clear 2: Not clear<br>2) After completion of memory clear, reset. |

## 66-11

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the output operation of FAX G3 mode 300BPS.<br>(Used to check the MODEM operation.)<br>Send level 0dB (Max.)<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | A signal of 300bps is outputted. (Level Max.)<br>Enter a number during execution to change the signal.<br>Press START to start sending a voice message.<br>Press CUSTOMSETTING to terminate. |

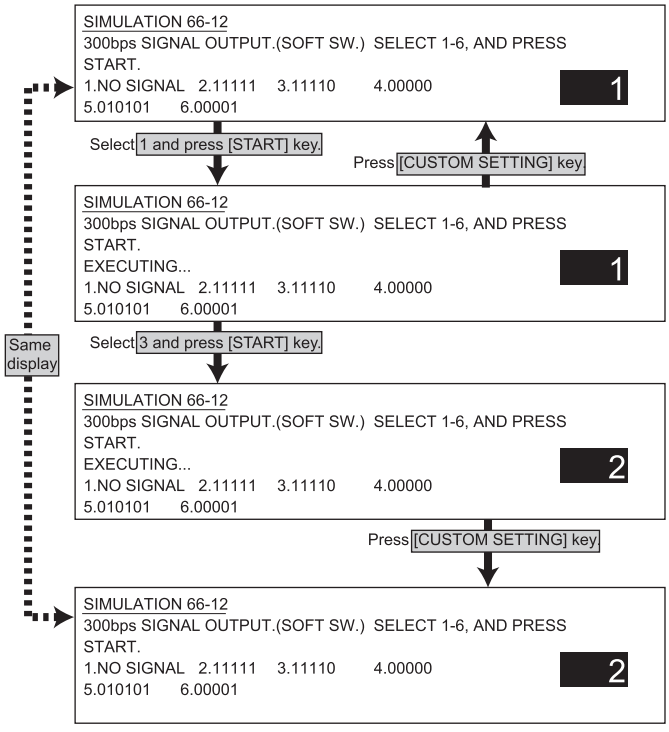



**<List of set values>**

| | | |
|---|---|---|
| 1 | NO SIGNAL | No signal |
| 2 | 11111 | |
| 3 | 11110 | |
| 4 | 00000 | |
| 5 | 10101 | |
| 6 | 00001 | |

## 66-12

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to check the output operation of FAX G3 mode 300BPS.<br>(Used to check the MODEM operation.)<br>Signals are sent in the send level set with the soft switch. (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | A signal of 300bps is outputted.<br>(Send level is set with SW.)<br>Enter a number during execution to change the signal.<br>Press START to start sending a voice message.<br>Press CUSTOMSETTING to terminate. |

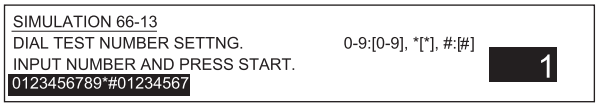



**<List of set values>**

| | | |
|---|---|---|
| 1 | NO SIGNAL | No signal |
| 2 | 11111 | |
| 3 | 11110 | |
| 4 | 00000 | |
| 5 | 10101 | |
| 6 | 00001 | |

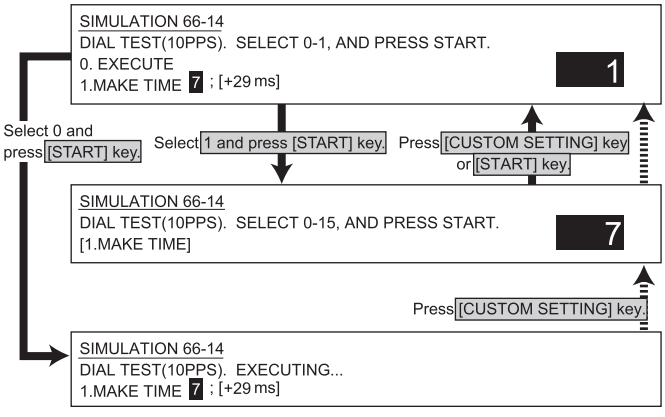
## 66-13

| Purpose | Setup |
|---|---|
| Function (Content) | Used to select the FAX dial signal output test. (The dial number signal set with this simulation is outputted in the dial signal output test with SIM 66-14~16) (Only when FAX is installed.) |
| Section | FAX |
| Item | Data |
| Operation/Procedure | The dial test number is set. Enter a number with 10 digit key pad, * key, and # key. The upper limit is 20 digits. Press CLEAR to return to the initial state. Press START to register. |




## 66-14

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the add time to the FAX pulse dial mode (10PPS) and to test the dial signal output. (The dial number signal set with SIM 66-13 is outputted.) Used to check dialing troubles and the operation. (Only when FAX is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | The dial test is performed. (10PPS output) The make time is set. When CUSTOM SETTING is pressed, the execution is terminated. |


SIMULATION 66-14
DIAL TEST(10PPS). SELECT 0-1, AND PRESS START.
0. EXECUTE
1.MAKE TIME 7 ; [+29 ms]
1
Select 0 and press [START] key.
Select 1 and press [START] key.
Press [CUSTOM SETTING] key or [START] key.
SIMULATION 66-14
DIAL TEST(10PPS). SELECT 0-15, AND PRESS START.
[1.MAKE TIME]
7
Press [CUSTOM SETTING] key.
SIMULATION 66-14
DIAL TEST(10PPS). EXECUTING...
1.MAKE TIME 7 ; [+29 ms]

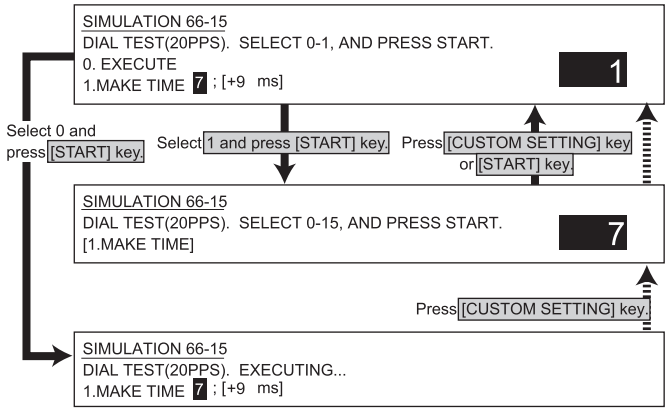
**<List of set values>**

| | |
|---|---|
| 0 | Execution |
| 1 | Dial pulse make time setup (0 - 15) |

* Dial is send with the setup value of +29ms.

## 66-15

| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the add time to the FAX pulse dial mode (20PPS) and to test the dial signal output. (The dial number signal set with SIM 66-13 is outputted.) Used to check dialing troubles and the operation. (Only when FAX is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | The dial test is performed. (20PPS output) The make time is set. When CUSTOM SETTING is pressed, the execution is terminated. |


SIMULATION 66-15
DIAL TEST(20PPS). SELECT 0-1, AND PRESS START.
0. EXECUTE
1.MAKE TIME 7 ; [+9 ms]
1
Select 0 and press [START] key.
Select 1 and press [START] key.
Press [CUSTOM SETTING] key or [START] key.
SIMULATION 66-15
DIAL TEST(20PPS). SELECT 0-15, AND PRESS START.
[1.MAKE TIME]
7
Press [CUSTOM SETTING] key.
SIMULATION 66-15
DIAL TEST(20PPS). EXECUTING...
1.MAKE TIME 7 ; [+9 ms]

**<List of set values>**

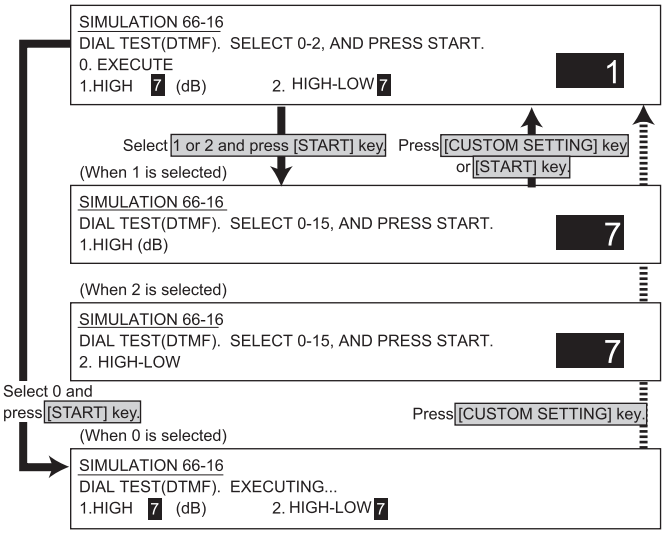
| | |
|---|---|
| 0 | Execution |
| 1 | Dial pulse make time setup (0 - 15) |

* Dial is set with the setup value of +19ms.

## 66-16

| Purpose | Setup |
|---|---|
| Function (Content) | Used to test the dial signal (DTMF) output in the FAX tone dial mode. (The dial number signal set with SIM 66-13 is outputted.)<br>The send level can be set to an optional level.<br>Used to check dialing troubles and the operation. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The dial test is performed. (DTMF signal output)<br>1) The level (dB) setup is made.<br>(Set range: 0 - 15dB)<br>2) The difference between high group and low group is set. (Set range: 0 - 15)<br>3) When CUSTOM SETTING is pressed, the execution is terminated. |

* For the set value, refer to the soft SW specifications.

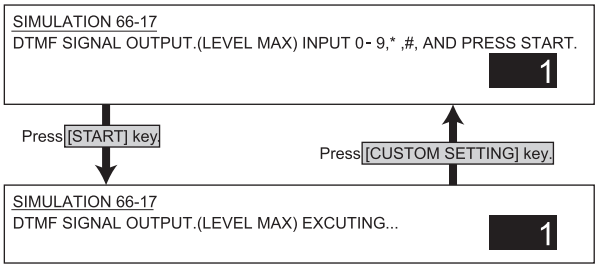



**<List of set values>**

| | | |
|---|---|---|
| 0 | | Execution |
| 1 | HIGH | High group level |
| 2 | HIGH-LOW | High group - low group |

## 66-17

| Purpose | Setup |
|---|---|
| Function (Content) | Used to test the dial signal (DTMF) output in the Fax tone dial mode. Send level 0db (fixed).<br>Used to check the dial IC operation.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The DTMF signal output is checked.<br>(Output level 0)<br>When CUSTOM SETTING is pressed, the execution is terminated. |

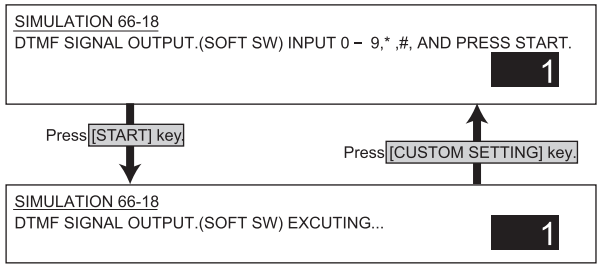



**<DTMF signal>**

| |
|---|
| 1 - 9, 0, *, # |

## 66-18

| Purpose | Setup |
|---|---|
| Function (Content) | Used to test the dial signal (DTMF) output in the Fax tone dial mode.<br>The send level set with the soft switch is outputted.<br>Used to check the dial IC operation.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The DTMF signal output is checked.<br>(Output level is set with soft SW.)<br>When CUSTOM SETTING is pressed, the execution is terminated. |

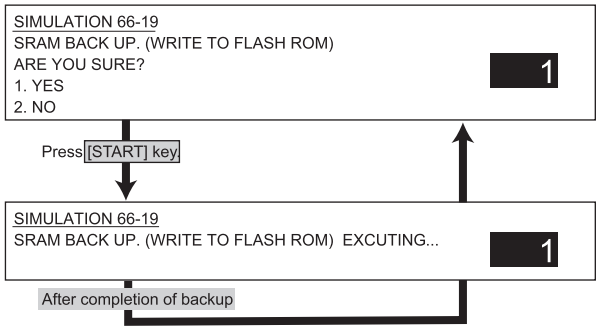



**<DTMF signal>**

| |
|---|
| 1 - 9, 0, *, # |

## 66-19

| Purpose | Setup |
|---|---|
| Function (Content) | Used to backup the FAX SRAM data (Set values of rapid key dialing) into the flash Memory (AR-MM9).<br>(When FAX is installed and FAX expansion memory is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | The content of SRAM is backed up into Flash Memory(AR-MM9). |

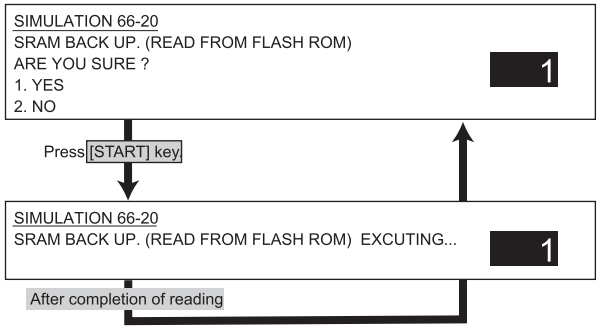



**<Set values>**

| | |
|---|---|
| 1 | Backup executed |
| 2 | No backup |

## 66-20

| Purpose | Setup |
|---|---|
| Function (Content) | Used to restore the backup data (SIM 66-19) to SRAM. (When FAX is installed and FAX expansion memory is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | Read/write from Flash Memory(AR-MM9) to SRAM is performed. |

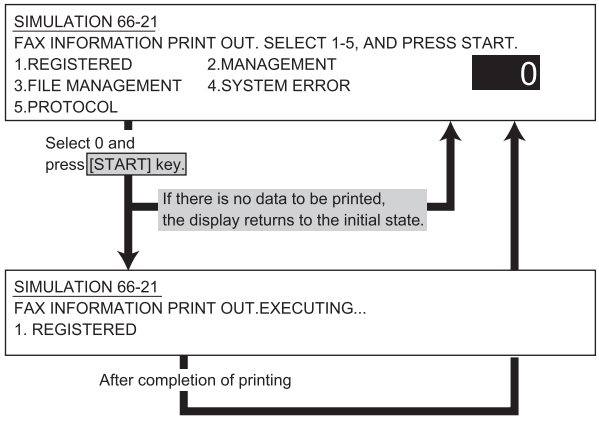



**<Set value>**

| | |
|---|---|
| 1 | Read/Write executed |
| 2 | Read/write not executed |

## 66-21

| Purpose | Adjustment, setup, operation data output, check (display, print) |
|---|---|
| Function (Content) | Used to print the FAX information (registrations, communication management, file management, system errors). (Only when FAX is installed.) |
| Section | Fax |
| Item | Data |
| Operation/Procedure | Information related to FAX is printed.<br>1) Select information to be printed.<br>2) The selected information is printed.<br>3) The paper size is automatically selected by the size stored in the image memory. |

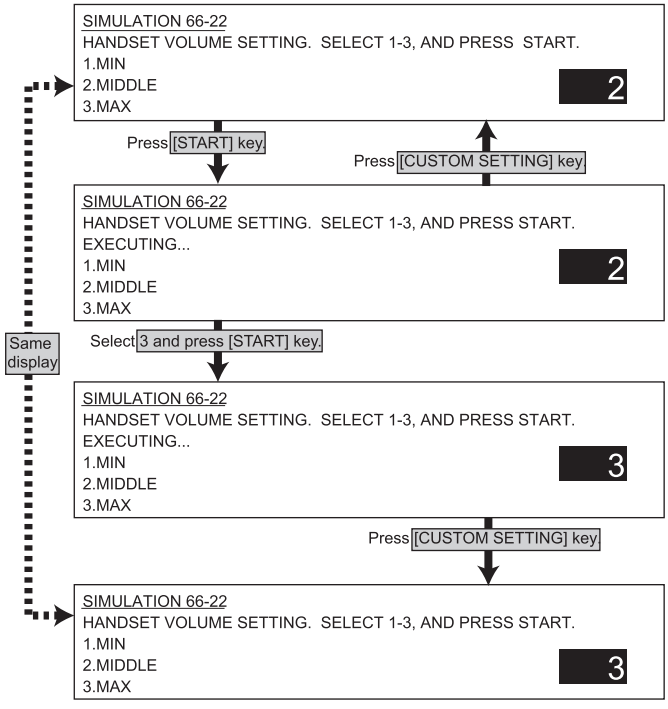

SIMULATION 66-21
FAX INFORMATION PRINT OUT. SELECT 1-5, AND PRESS START.
1.REGISTERED 2.MANAGEMENT
3.FILE MANAGEMENT 4.SYSTEM ERROR
5.PROTOCOL
0
Select 0 and press [START] key.
If there is no data to be printed, the display returns to the initial state.
SIMULATION 66-21
FAX INFORMATION PRINT OUT.EXECUTING...
1. REGISTERED
After completion of printing

**<List of set values>**

| | | |
|---|---|---|
| 1 | REGISTERED | Various registered information |
| 2 | MANAGEMENT | Communication management information |
| 3 | FILE MANAGEMENT | Fine management information |
| 4 | SYSTEM ERROR | System error information |
| 5 | PROTOCOL | Protocol information |

## 66-22

| Purpose | Setup |
|---|---|
| Function (Content) | Used to adjust the handset sound volume. (Only when FAX is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | The hand set sound volume is set.<br>1) Press START to set.<br>2) During execution, selection of 1, 2, and 3 is possible. |




**<List of set values>**

| | |
|---|---|
| 1 | Min, |
| 2 | Middle |
| 3 | Max. |

## 66-23

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to download the FAX program.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The contents of ROM in the option memory (AR-MM9) installing section are copied as FAX program. |

<This mode is for development, and inhibited in the market.>

SIMULATION 66-23
FAX PROGRAM DOWNLOAD.
EJECT PROTECT PIN, AND PRESS START.

## 66-24

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used clear the FAST memory data.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | 1) Select with 10 digit key pad, press START to execute the following.<br>1: Fast memory data clear<br>2: Not clear<br>2) After completion of memory clear, reset is made. |

SIMULATION 66-24
FAST MEMORY DATA CLEAR.
ARE YOU SURE ?
1. YES
2. NO

## 66-25

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to register the FAX number for MODEM dial-in. (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | |

<This mode is for development, and inhibited in the market.>

SIMULATION 66-25
M-D-IN FAX NUMBER SETTING. 0-9: [0-9],*: [*],#: [#]
INPUT NUMBER AND PRESS START.
0123456789*#01234567

## 66-26

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to register the external telephone number for MODEM dial-in. (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | |

<This mode is for development, and inhibited in the market.>

SIMULATION 66-26
M-D-IN EXTEL NUMBER SETTING. 0-9: [0-9],*: [*],#: [#]
INPUT NUMBER AND PRESS START.
0123456789*#01234567

## 66-27

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to register the voice-warp transfer number.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | |

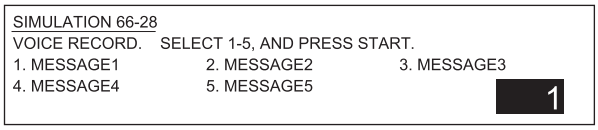
<This mode is for development, and inhibited in the market.>

SIMULATION 66-27
V-WP TRANSMIT NUMBER SETTING. 0-9: [0-9],*: [*],#: [#]
INPUT NUMBER AND PRESS START.
0123456789*#01234567

## 66-28

| Purpose | Setup |
|---|---|
| Function (Content) | Used to record a sound message.<br>Recording is available in 1 ~ 5, max. 6sec for one. (Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | 1) Record a sound message from the handset.<br>2) Press CUSTOM SETTING to interrupt recording |

<This mode is for development, and inhibited in the market.>




## 66-29

| Purpose | Setup |
|---|---|
| Function (Content) | Used to clear the telephone directory. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | 1) Select with 10 digit key pad and press START to execute the following.<br>1: Telephone directory clear<br>2: Telephone directory not clear |

## 66-30

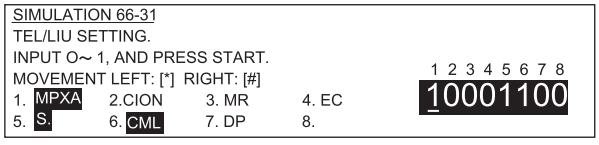
| Purpose | Setup |
|---|---|
| Function (Content) | Used to check TEL/LIU status change.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The TEL/LIU status can be checked.<br>The display is highlighted when the status is changed. |

**<List of set values>**

| | |
|---|---|
| HS1 | Polarity reverse signal |
| HS2 | Polarity reverse signal |
| RHS | Handset hook SW |
| EXHS | External telephone hook SW |

## 66-31

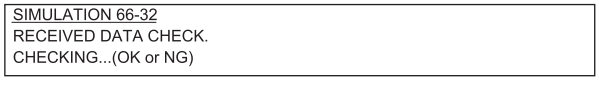
| Purpose | Setup |
|---|---|
| Function (Content) | Used to set the TEL/LIU status.<br>(Only when FAX is installed.) |
| Section | Fax |
| Item | Operation |
| Operation/Procedure | Entry of only 0 or 1 is effective.<br>Shift the cursor to the bit to enter.<br>Cursor shift keys : ← : * , → : #.<br>The bits are 1, 2, 3, 4, 5, 6, 7, and 8 from the left.<br>The entered bit is highlighted.<br>Press STRT to select the relay. |


SIMULATION 66-31
TEL/LIU SETTING.
INPUT O~ 1, AND PRESS START.
MOVEMENT LEFT: [*] RIGHT: [#]
1. MPXA 2.CION 3. MR 4. EC
5. S. 6. CML 7. DP 8.
1 2 3 4 5 6 7 8
10001100

## 66-32

| Purpose | Setup |
|---|---|
| Function (Content) | Used to check the received data.<br>(Only when FAX is installed.) |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The fixed data received from the line are checked. |

<This mode is for development, and inhibited in the market.>




**<Display message>**

| | |
|---|---|
| CHECKING | Checking |
| OK | Checking complete |
| NG | Checking end |

## 66-33

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to check signal detection. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | When the signal is detected, the display is highlighted. |

<This mode is for development, and inhibited in the market.>

SIMULATION 66-33
SIGNAL DETECT CHECK.
BUSY TONE CNG CED FNET DTM

## 66-34

| | |
|---|---|
| Purpose | Setup |
| Function (Content) | Used to measure and display the communication time. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The time spent for communication is measured. Send/receives performed in the normal mode. The communication time is displayed with the simulation. (unit: ms) |

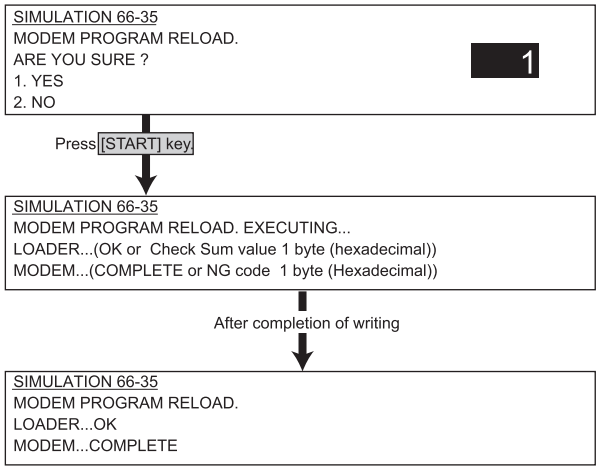
SIMULATION 66-34
COMMUNICATION TIME DISPLAY.
***** ms

**<Setup for send>**

| | |
|---|---|
| Communication means | memory transmission |
| Image quality | Normal |
| Density | Thin |
| ECM | ON |
| Sender record | OFF |

## 66-35

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Modem program rewriting. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | The modem program in the FAX program is rewritten.<br>1) Select with 10 digit key pad and press START to execute the following.<br>1: MODEM program rewrite<br>2:Not clear<br>2) Check the check sum value (loader).<br>If it is OK, the test is normally completed.<br>If NG, the check sum value<br>(1 byte = hexadecimal) is displayed.<br>3) If the check sum value is NG, the MODEM result is also NG.<br>4) The Modem rewrite result is displayed. |

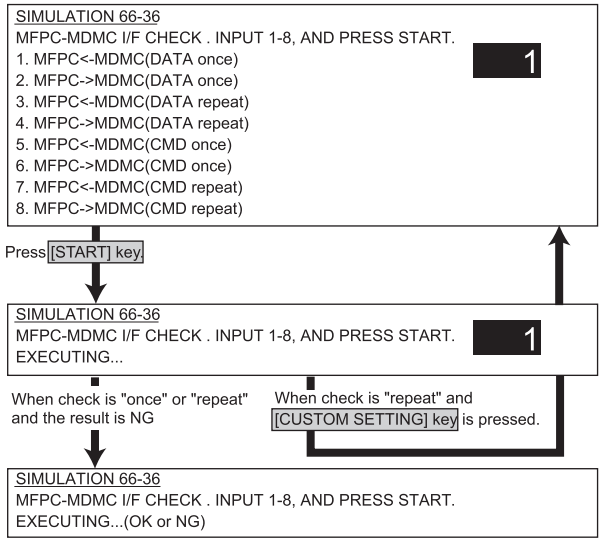



**<Result of MODEM writing>**

| | |
|---|---|
| COMPLETE | Writing completed |
| 81 | Check sum error |
| 82 | Write error |
| 83 | Delete error |
| 84 | Verify error |
| NG | Due to loader error |

## 66-36

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check interface between MFPC and MDMC. Check is made in the data line or the command line. |
| Section | FAX |
| Item | Operation |
| Operation/Procedure | 1) Select with 10 digit key pad and press START.<br>2) When check is "repeat," the operation is executed until the result becomes NG or CUSTOM SETTING is pressed. |




**<List of display values>**

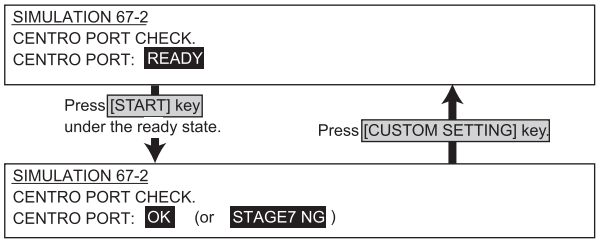
| | | |
|---|---|---|
| 1 | MFPC <- MDMC | Data line once only |
| 2 | MFPC -> MDMC | Data line once only |
| 3 | MFPC <- MDMC | Data line repeat |
| 4 | MFPC -> MDMC | Data line repeat |
| 5 | MFPC <- MDMC | Command line once only |
| 6 | MFPC -> MDMC | Command line once only |
| 7 | MFPC <- MDMC | Command line repeat |
| 8 | MFPC -> MDMC | Command line repeat |

**Main code 67**

## 67-2

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the parallel I/F operation of the printer.<br>(This simulation is made only in the production site and not in the market.<br>It requires a special tool.) |
| Section | Printer |
| Item | Operation |
| Operation/Procedure | The Centro port is checked.<br>1) Insert the adjustment jig into the Centro port under the ready state, and press STRT.<br>2) The Centro port check is started.<br>3) If normal, OK is displayed. If abnormal, the stage number where an error occurred and NG are displayed. |

<This simulation is used only for production, and inhibited in the market.>




**<Display message>**

| | |
|---|---|
| WAITING | Waiting |
| READY | Check start OK |
| OK | Check complete (normal) |
| STAGE*NG | Check end (An error occurred in Stage *: 1-11) |

## 67-11

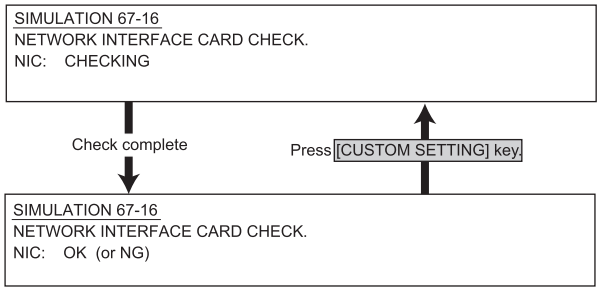
| | |
|---|---|
| Purpose | Adjustment |
| Function (Content) | Used to set Enable/Disable of the parallel I/F select signal of the printer. |
| Section | Printer |
| Item | Operation |
| Operation/Procedure | The select signal of Centro port is set. |
| Press START to set. | |

**<Set values>**

| | |
|---|---|
| 0 | OFF |
| 1 | ON (Initial value) |

## 67-16

| | |
|---|---|
| Purpose | Operation test, check |
| Function (Content) | Used to check the operation of the network card. |
| Section | Printer |
| Item | Operation |
| Operation/Procedure | The network card is checked. |




**<Display message>**

| | |
|---|---|
| CHECKING | Checking |
| OK | Check complete (Normal) |
| NG | Check end (Abnormal) |

# [11] TROUBLE CODES

## 1.Trouble codes list

| Trouble codes | | Contents | Remark | Trouble detection |
|---|---|---|---|---|
| C1 | 00 | MC trouble | | PCU |
| E6 | 10 | CIS shading trouble (Black correction) | When the scanner is installed | SCANNER |
| | 11 | CIS shading trouble (White correction) | When the scanner is installed | SCANNER |
| | 14 | CIS-ASIC communication trouble | When the scanner is installed | SCANNER |
| E7 | 02 | Laser trouble | | PCU |
| | 03 | HDD trouble | With HDD installed | Controller |
| | 06 | Decode error trouble | | Controller |
| | 10 | Shading trouble (Black correction) | When the scanner is installed | SCANNER |
| | 11 | Shading trouble (White correction) | When the scanner is installed | SCANNER |
| | 14 | CCD-ASIC communication trouble | When the scanner is installed | SCANNER |
| | 50 | LSU connection trouble | | PCU |
| | 80 | SCANNER PWB communication trouble | When the scanner is installed | ICU |
| | 90 | PCU communication trouble | When the scanner is installed | ICU |
| F1 | 00 | Finisher communication trouble | With Finisher installed | PCU |
| | 08 | Finisher staple shift motor trouble | With Finisher installed | PCU |
| | 10 | Finisher stapler motor trouble | With Finisher installed | PCU |
| | 11 | Finisher bundle exit motor trouble | With Finisher installed | PCU |
| | 15 | Finisher lift motor trouble | With Finisher installed | PCU |
| | 19 | Finisher alignment motor trouble FRONT | With Finisher installed | PCU |
| | 20 | Finisher alignment motor trouble | With Finisher installed | PCU |
| | 80 | Finisher 24V power supply trouble | With Finisher installed | PCU |
| | 87 | Finisher staple rotation motor trouble | With Finisher installed | |
| F1 | 00 | Mail bin stacker communication trouble | With Mail bin stacker installed | PCU |
| | 02 | mail bin stacker main drive motor trouble | With Mail bin stacker installed | PCU |
| | 12 | Mail bin stacker gate trouble | With Mail bin stacker installed | PCU |
| | 80 | Mail bin stacker 24V power supply trouble | With Mail bin stacker installed | PCU |

| Trouble codes | | Contents | Remark | Trouble detection |
|---|---|---|---|---|
| F1 | 03 | Console finisher paddle motor trouble | With Console Finisher installed | PCU |
| | 06 | Console finisher slide motor trouble | With Console Finisher installed | PCU |
| | 10 | Console finisher stapler motor trouble | With Console Finisher installed | PCU |
| | 11 | Console finisher bundle exit motor trouble | With Console Finisher installed | PCU |
| | 15 | Console finisher lift motor trouble | With Console Finisher installed | PCU |
| | 19 | Console finisher alignment motor trouble FRONT | With Console Finisher installed | PCU |
| | 20 | Console finisher alignment motor trouble | With Console Finisher installed | PCU |
| | 30 | Console finisher communication trouble | With Console Finisher installed | PCU |
| | 31 | Console finisher fold sensor trouble | With Console Finisher installed | PCU |
| | 32 | Console finisher punch unit communication trouble | With Console Finisher installed | PCU |
| | 33 | Console finisher punch side register motor trouble | With Console Finisher installed | PCU |
| | 34 | Console finisher punch motor trouble | With Console Finisher installed | PCU |
| | 35 | Console finisher punch side register sensor trouble | With Console Finisher installed | PCU |
| | 36 | Console finisher punch timing sensor trouble | With Console Finisher installed | PCU |
| | 37 | Console finisher backup RAM trouble | With Console Finisher installed | PCU |
| | 38 | Console finisher punch backup RAM trouble | With Console Finisher installed | PCU |
| | 81 | Console finisher transport motor trouble | With Console Finisher installed | PCU |
| F2 | 00 | Toner concentration sensor open | | PCU |
| | 02 | Toner supply abnormality | | PCU |
| | 04 | Improper cartridge (Destination error, life cycle error) | | PCU |
| | 05 | CRUM error | | PCU |
| | 39 | Process thermistor breakdown | | PCU |
| F3 | 12 | Tray 1 lift-p trouble | | PCU |
| | 22 | Tray 2 lift-up trouble (Multi-purpose tray) | Multi-purpose tray | PCU |

| Trouble codes | | Contents | Remark | Trouble detection |
|---|---|---|---|---|
| F6 | 00 | FAX board communication trouble | When the Fax board is installed | ICU |
| | 01 | FAX expansion Flash Rom abnormality | When the Fax board is installed | ICU |
| | 04 | FAX MODEM operation abnormality | When the Fax board is installed | FAX |
| F7 | 01 | FAX board EEPROM read/write error | When the Fax board is installed | FAX |
| H2 | 00 | Thermistor open (HL1) | | PCU |
| | 01 | Thermistor open (HL2) | | PCU |
| H3 | 00 | Heat roller high temperature detection (HL1) | | PCU |
| | 01 | Heat roller high temperature detection (HL2) | | PCU |
| H4 | 00 | Heat roller low temperature detection (HL1) | | PCU |
| | 01 | Heat roller low temperature detection (HL2) | | PCU |
| H5 | 01 | 5-time continuous POD1 not-reaching JAM detection | | PCU |
| L1 | 00 | Scanner feed trouble | When the scanner is installed | SCANNER |
| L3 | 00 | Scanner return trouble | When the scanner is installed | SCANNER |
| L4 | 01 | main motor lock detection | | PCU |
| | 02 | Drum motor lock detection | | PCU |
| L6 | 10 | Polygon motor lock detection | | PCU |
| L8 | 01 | No full-wave signal | | PCU |
| | 02 | Full-wave signal width abnormality | | PCU |
| U6 | 00 | Desk/LCC communication trouble | With Paper feed desk installed | PCU |
| | 01 | Desk/LCC1CS lift-up trouble (Multi-purpose tray) | With Paper feed desk installed | PCU |
| | 02 | Desk2 CS lift-up trouble/LCC1 lift-up trouble | With Paper feed desk installed | PCU |
| | 03 | Desk3 CS lift-up trouble/LCC2 lift-up trouble | With Paper feed desk installed | PCU |
| | 10 | Desk/LCC transport motor trouble | With Paper feed desk installed | PCU |
| EE | EL | Auto developer adjustment trouble (Over-toner) | Only during DIAG | PCU |
| | EU | Auto developer adjustment trouble (Under-toner) | Only during DIAG | PCU |
| F9 | 02 | Centro port check error | | Controller |
| | 03 | NIC port check error | | Controller |
| U1 | 01 | FAX Battery abnormality | With FAX board installed | Controller |
| | 02 | RTC read abnormality (common with FAX, on ICU PWB) | When the Fax board is installed | ICU |

| Trouble codes | | Contents | Remark | Trouble detection |
|---|---|---|---|---|
| U2 | 00 | EEPROM read/write error (Controller) | | Controller |
| | 11 | Counter check sum error (Controller EEPROM) | | Controller |
| | 12 | Adjustment value check sum error (Controller EEPROM) | | Controller |
| | 80 | Scanner section EEPROM read/write error | When the scanner is installed | SCANNER |
| | 81 | Scanner section memory sum check error | When the scanner is installed | SCANNER |
| | 90 | PCU section EEPROM read/ write error | | PCU |
| | 91 | PCU section memory sum check error | | PCU |
| U7 | 00 | PC/MODEM communication error | | Controller |
| PF | -- | RIC copy inhibit command reception | | Controller |
| CH | -- | Door open (CH ON) | | PCU |
| | 00 | No developer cartridge | | PCU |
| | 01 | No toner cartridge | | PCU |
| -- | -- | Auditor not ready | | Controller |
| PC | -- | Personal counter not installed | | Controller |

## 2. Details of trouble codes

| MAIN | SUB | | |
|---|---|---|---|
| C1 | 00 | Content | MC trouble |
| | | Detail | Main charger output abnormality (Output open)<br>Trouble signal is outputted from the high voltage transformer. |
| | | Cause | The main charger is not installed properly.<br>The main charger is not assembled properly.<br>Disconnection of connector of high voltage transformer.<br>High voltage harness disconnection or breakage. |
| | | Check and remedy | Use the diag mode or DIAG to check the main charger output.<br>Check for disconnection of the main charger.<br>Replace the high voltage unit. |
| E6 | 10 | Content | CIS shading trouble (Black correction) |
| | | Details | The CIS black scan level is abnormal when the lamp is off. |
| | | Cause | Abnormal harness installation to CIS unit<br>CIS unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Check CIS unit harness.<br>Check CIS unit.<br>Check scanner PWB. |

| MAIN | SUB | | |
|---|---|---|---|
| E6 | 11 | Content | CSI shading trouble (White correction) |
| | | Details | The CIS white reference plate scan level is abnormal when the lamp is on. |
| | | Cause | Abnormal harness installation to CIS unit<br>Dirt on the white reference plate.<br>CIS lighting error<br>CIS unit installation trouble<br>CIS unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Clean the white reference plate.<br>Check CIS light quantity (SIM 5-3) and lighting.<br>Check CIS unit harness.<br>Check scanner PWB. |
| | 14 | Content | CIS communication trouble |
| | | Details | Communication trouble (clock sync) between scanner PWB and CIS-ASIC |
| | | Cause | Abnormal harness installation to CIS unit<br>CIS unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Check CIS unit harness.<br>Check CIS unit.<br>Check scanner PWB. |
| E7 | 02 | Content | Laser trouble |
| | | Detail | BD signal from LSU is kept OFF, or ON. |
| | | Cause | The connector of LSU or the harness in LSU is disconnected or broken.<br>The polygon motor does not rotate normally.<br>The laser home position sensor in LSU is shifted.<br>The proper voltage is not supplied to the power line for laser.<br>Laser emitting diode trouble<br>PCU PWB trouble<br>Controller PWB trouble |
| | | Check and remedy | Check for disconnection of the LSU connector.<br>Use DIAG (SIM 61-1) to check LSU operation.<br>Check that the polygon motor rotates normally or not.<br>Check light emission of laser emitting diode.<br>Replace the LSU unit.<br>Replace the PCU PWB.<br>Replace the Controller PWB. |
| | 03 | Content | HDD trouble |
| | | Detail | HDD does not operate properly in the machine with HDD installed. |
| | | Cause | HDD is not installed properly to the Controller PWB.<br>HDD does not operate properly in the Controller PWB.<br>Controller PWB trouble |
| | | Check and remedy | Check installation of HDD to the Controller PWB.<br>Check connection of the harness of HDD to the Controller PWB.<br>Use DIAG (SIM 62-2, -3) to check read/write of HDD.<br>Replace HDD.<br>Replace Controller PWB. |

| MAIN | SUB | | |
|---|---|---|---|
| E7 | 06 | Content | Decode error trouble |
| | | Detail | A decode error occurs during making of an image. |
| | | Cause | Data error during input from PCI to PM.<br>PM trouble<br>Data error during image compression/ transfer.<br>Controller PWB abnormality |
| | | Check and remedy | Check insertion of the PWB. (PCI bus)<br>If the error occurred in a FAX job, check installation of the FAX PWB.<br>For the other cases, check the Controller PWB.<br>Replace the Controller PWB. |
| | 10 | Content | Shading trouble (Black correction) |
| | | Details | CCD black scan level abnormality when the copy lamp is off. |
| | | Cause | Abnormal installation of flat cable to CCD unit.<br>CCD unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Check installation of CCD unit flat cable.<br>Check CCD unit.<br>Check scanner PWB. |
| | 11 | Content | Shading trouble (White correction) |
| | | Details | CCD white reference plate scan level abnormality when the copy lamp is ON. |
| | | Cause | Abnormal installation of flat cable to CCD unit.<br>Dirt on mirror, lens, white reference plate<br>Copy lamp lighting abnormality<br>Abnormal installation of CCD unit<br>CCD unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Clean mirror, lens, and white reference plate.<br>Check copy lamp light quantity (SIM 5-3) and lighting.<br>Check CCD unit.<br>Check scanner PWB. |
| | 14 | Content | CCD communication trouble |
| | | Details | Communication trouble (clock sync) between scanner PWB and CCD-ASIC |
| | | Cause | Abnormal installation of harness to CCD unit<br>CCD unit abnormality<br>Scanner PWB abnormality |
| | | Check & Remedy | Check CCD unit harness.<br>Check CCD unit.<br>Check scanner PWB. |
| | 50 | Content | LSU connection trouble |
| | | Detail | An LSU which does not conform to the machine is installed. |
| | | Cause | PCU PWB trouble<br>LSU trouble |
| | | Check and remedy | Check LSU PWB. Check PCU PWB.<br>Check connection of the connector and the harness between PCU and LSU. |

| MAIN | SUB | | |
|---|---|---|---|
| E7 | 80 | Content | Communication trouble (ICU detection) between ICU and scanner |
| | | Details | Communication establishment error/Fleming/ Parity/Protocol error |
| | | Cause | Defective connection of slave unit PWB connector<br>Defective harness between slave unit PWB and Controller PWB<br>Slave unit PWB mother board connector pin breakage |
| | | Check & Remedy | Check connector and harness of slave unit PWB and Controller PWB.<br>Check grounding of machine. |
| | 90 | Content | PCU communication trouble |
| | | Details | Communication establishment error/Fleming/ Parity/Protocol error |
| | | Cause | Defective connection of slave unit PWB connector<br>Defective harness between slave unit PWB and Controller PWB<br>Slave unit PWB mother board connector pin breakage |
| | | Check & Remedy | Check connector and harness of slave unit PWB and Controller PWB.<br>Check grounding of machine. |
| F1 | 00 | Content | Finisher (AR-FN6) communication trouble |
| | | Detail | Communication cable test error after turning on the power or exiting from DIAG.<br>Communication error with the finisher |
| | | Cause | Improper connection or disconnection of connectors and harness between the machine and the finisher.<br>Finisher control PWB trouble<br>Control PWB (PCU) trouble<br>Malfunction by noises |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check connectors and harness in the communication line.<br>Replace the finisher control PWB or PCU PWB. |
| | 08 | Content | Finisher (AR-FN6) staple shift motor trouble |
| | | Detail | Staple motor drive trouble |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check operations of the staple motor. |
| | 10 | Content | Finisher (AR-FN6) stapler motor trouble |
| | | Detail | Stapler motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 11 | Content | Finisher (AR-FN6) bundle exit motor trouble |
| | | Detail | Bundle exit motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |

| MAIN | SUB | | |
|---|---|---|---|
| F1 | 15 | Content | Finisher (AR-FN6) lift motor trouble |
| | | Detail | Lift motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | 19 | Content | Finisher (AR-FN6) front alignment motor trouble |
| | | Detail | Front alignment motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 20 | Content | Finisher (AR-FN6) rear alignment motor trouble |
| | | Detail | Rear alignment motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 80 | Content | Finisher (AR-FN6) power abnormality |
| | | Detail | The 24V power is not supplied to the finisher PWB. |
| | | Cause | Improper connection or disconnection of connector and harness<br>Finisher control PWB trouble<br>Power unit trouble |
| | | Check and remedy | Use DIAG (SIM3-2) to check the sensor. |
| | 87 | Content | Finisher (AR-FN6) staple rotation motor trouble |
| | | Detail | Front staple rotation motor trouble |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| F1 | 00 | Content | Mail-bin stacker (AR-MS1) communication trouble |
| | | Detail | Communication cable test error after turning on the power or exiting from DIAG.<br>Communication error with the Mail-bin stacker. |
| | | Cause | Improper connection or disconnection of connector and harness between the machine and the Mail-bin stacker.<br>Mail-bin stacker control PWB trouble<br>Control PWB (PCU) trouble<br>Malfunction by noises |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check harness and connector in the communication line.<br>Replace the Mail-bin stacker PWB or PCU PWB. |

| MAIN | SUB | | |
|---|---|---|---|
| F1 | 02 | Content | Mail-bin stacker (AR-MS1) transport motor abnormality |
| | | Detail | Transport motor trouble |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Mail-bin stacker control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-21) to check the transport motor operation. |
| | 12 | Content | Mail-bin stacker (AR-MS1) gate trouble |
| | | Detail | Gate operation abnormality |
| | | Cause | Gate lock<br>Mail-bin stacker control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-21) to check the transport gate operation. |
| | 80 | Content | Mail-bin stacker (AR-MS1) power abnormality |
| | | Detail | The 24V power is not supplied to the Mail-bin stacker PWB. |
| | | Cause | Improper connection or disconnection of connector and harness<br>Mail-bin stacker control PWB trouble<br>Power unit (AR-DC1) trouble |
| | | Check and remedy | Use DIAG (SIM3-20) to check the sensor operation. |
| F1 | 03 | Content | Console finisher (AR-FN7) paddle motor trouble |
| | | Detail | Paddle motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 06 | Content | Console finisher (AR-FN7) slide motor trouble |
| | | Detail | Slide motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 10 | Content | Console finisher (AR-FN7) stapler motor trouble |
| | | Detail | Stapler motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 11 | Content | Console finisher (AR-FN7) bundle exit motor trouble |
| | | Detail | Bundle exit motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |

| MAIN | SUB | | |
|---|---|---|---|
| F1 | 15 | Content | Console finisher (AR-FN7) lift motor trouble |
| | | Detail | Lift motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 19 | Content | Console finisher (AR-FN7) front alignment motor trouble |
| | | Detail | Front alignment motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 20 | Content | Console finisher (AR-FN7) rear alignment motor trouble |
| | | Detail | Rear alignment motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 30 | Content | Console finisher (AR-FN7) communication trouble |
| | | Detail | Communication cable test error after turning on the power or exiting from DIAG.<br>Communication error with the console finisher |
| | | Cause | Improper connection or disconnection of connector and harness between the machine and the console finisher.<br>Console finisher control PWB trouble<br>Control PWB (PCU) trouble<br>Malfunction by noises |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check connectors and harness in the communication line.<br>Replace the console finisher control PWB or PCU PWB. |
| | 31 | Content | Console finisher (AR-FN7) fold sensor trouble |
| | | Detail | Sensor input value abnormality |
| | | Cause | Sensor breakage<br>harness breakage<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-2) to check the sensor operation. |
| | 32 | Content | Communication trouble between the console finisher (AR-FN7) and the punch unit (AR-PN1). |
| | | Detail | Communication err between the console finisher and the punch unit. |
| | | Cause | Improper connection or disconnection of connector and harness between the console finisher and the punch unit.<br>Console finisher control PWB trouble<br>Control PWB (PCU) trouble<br>Malfunction by noise |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check connectors and harness in the communication line.<br>Replace the console finisher control PWB. |

| MAIN | SUB | | |
|---|---|---|---|
| F1 | 33 | Content | Console finisher (AR-FN7)<br>punch (AR-PN1) side registration motor trouble |
| | | Detail | Punch side registration motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 34 | Content | Console finisher (AR-FN7)<br>punch (AR-PN1) motor trouble |
| | | Detail | Punch motor operation abnormality |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |
| | 35 | Content | Console finisher (AR-FN7)<br>punch (AR-PN1) side registration sensor trouble |
| | | Detail | Sensor input value abnormality |
| | | Cause | Sensor breakage<br>Harness disconnection<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-2) to check the sensor operation. |
| | 36 | Content | Console finisher (AR-FN7)<br>punch (AR-PN1) timing sensor trouble |
| | | Detail | Sensor input value abnormality |
| | | Cause | Sensor breakage<br>Harness disconnection<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-2) to check the sensor operation. |
| | 37 | Content | Console finisher (AR-FN7)<br>backup RAM trouble |
| | | Detail | Backup RAM contents are disturbed. |
| | | Cause | Console finisher control PWB trouble<br>Malfunction by noise |
| | | Check and remedy | Replace the console finisher control PWB. |
| | 38 | Content | Console finisher (AR-FN7)<br>punch (AR-PN1) backup RAM trouble |
| | | Detail | Punch unit backup RAM contents are disturbed. |
| | | Cause | Punch control PWB trouble<br>Malfunction by noise |
| | | Check and remedy | Replace the punch control PWB. |
| | 81 | Content | Console finisher transport motor abnormality |
| | | Detail | Transport motor trouble |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Console finisher control PWB trouble |
| | | Check and remedy | Use DIAG (SIM3-3) to check the motor operation. |

| MAIN | SUB | | |
|---|---|---|---|
| F2 | 00 | Content | Toner control sensor abnormality |
| | | Detail | Toner control sensor output open |
| | | Cause | Connector harness trouble<br>Connector disconnection |
| | | Check and remedy | Check connection of the toner control sensor.<br>Check connection of connector and harness to the main PWB.<br>Check for disconnection of harness. |
| | 02 | Content | Toner supply abnormality |
| | | Detail | Toner control sensor output value becomes under-toner too earlier. |
| | | Cause | Connector harness trouble<br>Toner control sensor trouble<br>The toner cartridge seal is not removed |
| | | Check and remedy | Check connection of the connector in the toner motor section.<br>Check connection of connector and harness to the main PWB.<br>Check for disconnection of harness.<br>Toner control sensor output check DIAG (SIM25-1)<br>Remove the toner cartridge seal. |
| | 04 | Content | Improper cartridge (life cycle error, etc.) |
| | | Detail | An improper process cartridge is inserted. |
| | | Cause | IC chip trouble<br>Improper cartridge |
| | | Check and remedy | Insert a proper cartridge. |
| | 05 | Content | CRUM error |
| | | Detail | Communication with IC chip cannot be made. |
| | | Cause | IC chip trouble<br>Improper cartridge |
| | | Check and remedy | Insert a proper cartridge. |
| | 39 | Content | Process thermistor trouble |
| | | Detail | Process thermistor open |
| | | Cause | Process thermistor trouble<br>Process thermistor harness disconnection<br>PCU PWB trouble |
| | | Check and remedy | Check connection of harness and connector of the process thermistor.<br>Check PCU PWB. |
| F3 | 12 | Content | Machine no. 1 tray lift-up trouble |
| | | Detail | PED does not turn ON in the specified time.<br>LUD does not turn ON in the specified time. |
| | | Cause | PED/LUD trouble<br>No. 1 tray lift-up trouble<br>Check connection of harness between the PCVU PWB, lift-up unit, and paper feed unit. |
| | | Check and remedy | Check PED, LUD, and their harness and connectors.<br>Check the lift-up unit. |
| | 22 | Content | Multi purpose tray lift-up trouble |
| | | Detail | MCPED does not turn ON in the specified time.<br>MCLUD does not turn ON in the specified time. |
| | | Cause | MCPED/MCLUD trouble<br>Multi purpose tray lift-up motor trouble<br>Harness disconnection f the PCU PWB, the lift-up unit, and the paper feed unit. |
| | | Check and remedy | Check MCPED, PCLUD, and their harness and connectors.<br>Check the lift-up unit. |

| MAIN | SUB | | |
|---|---|---|---|
| F6 | 00 | Content | Communication trouble (ICU detection) between ICU and FAX |
| | | Details | Communication establishment error/Fleming/ Parity/Protocol error |
| | | Cause | Slave unit PWB connector disconnection<br>Harness abnormality between slave unit PWB and ICU PWB.<br>Slave unit PWB mother board connector pin breakage<br>Slave unit ROM abnormality/No ROM/ Reverse insertion of ROM/ROM pin breakable |
| | | Check & Remedy | Check connector harness between slave unit PWB and ICU PWB.<br>Check grounding of machine.<br>Check slave unit PWB ROM. |
| | 01 | Content | FAX expansion flash memory abnormality (ICU detection) |
| | | Details | Expansion flash memory with SRAM backup data is installed. |
| | | Cause | SRAM backup data is detected in expansion flash memory.<br>Expansion flash memory in which SRAM data are backed up with SIM 66-19 is installed. |
| | | Check & Remedy | Restore backup data to SRAM with SIM 66-20, and clear expansion flash memory with SIM 66-10. If data are unnecessary, clear expansion flash memory with SIM 66-10. |
| | 04 | Content | FAX modem operation abnormality |
| | | Details | FAX PWB modem chip operation abnormality |
| | | Cause | The boot test pin in the FAX PWB is shorted and normal operation is tried.<br>Modem chip operation abnormality in FAX PWB |
| | | Check & Remedy | Turn on the power again without shorting the boot test pin in the FAX PWB.<br>Replace FAX PWB. |
| F7 | 01 | Content | FAX board EEPROM read/write error |
| | | Details | EEPROM access error (read/write) |
| | | Cause | EEPROM trouble<br>FAX PWB EEPROM access circuit trouble |
| | | Check & Remedy | Replace FAX PWB. |
| H2 | 00… HL1 (RT H1)<br>01… HL2 (RT H2) | Content | thermistor open<br>Fusing unit not installed |
| | | Detail | Thermistor is open.<br>(An input voltage of 2.92V or above is detected.)<br>Fusing unit not installed |
| | | Cause | Thermistor trouble<br>Control PWB trouble<br>Fusing section connector disconnection<br>AC power trouble<br>Fusing unit not installed |
| | | Check and remedy | Check harnesses and connectors from the thermistor to the control PWB.<br>Use DIAG (SIM14) to clear the self diag display. |

| MAIN | SUB | | |
|---|---|---|---|
| H3 | 00… HL1 (RT H1)<br>01… HL2 (RT H2) | Content | Fusing section high temperature trouble |
| | | Detail | The fusing temperature exceeds 242°C.<br>(An input voltage of 0.27V or above is detected.) |
| | | Cause | thermistor trouble<br>Control PWB trouble<br>Fusing section connector disconnection<br>AC power trouble |
| | | Check and remedy | Use DIAG (SIM5-2) to check the heater lamp<br>**Blinking operation.**<br>If the heater lamp blinks normally:<br>Check the thermistor and its harness.<br>Check the thermistor input circuit in the control PWB.<br>**If the heater lamp keep lighting:**<br>Check the AC PWB and the lamp control circuit in the control PWB.<br>Use DIAG (SIM14) to cancel the trouble |
| H4 | 00… HL1 (RT H1)<br>01… HL2 (RT H2) | Content | Fusing section low temperature trouble |
| | | Detail | •The set temperature is not reached within the specified time (normally 3 min) when warming up or resetting from pre-heating.<br>•Under the ready state.<br>(An input voltage of 1.21V or below is detected 5 times continuously.) |
| | | Cause | thermistor trouble<br>Heater lamp trouble<br>Control PWB trouble<br>Thermostat trouble<br>AC power trouble<br>Interlock switch trouble |
| | | Check and remedy | Use DIAG (SIM5-2) to check the heater lamp<br>**Blinking operation.**<br>If the heater lamp blinks normally:<br>Check the thermistor and its harness.<br>Check the thermistor input circuit in the control PWB.<br>**If the heater lamp does not light:**<br>Check for heater lamp disconnection and thermostat disconnection.<br>Check the interlock switch.<br>Check the AC PWB and the lamp control circuit in the control PWB.<br>Use DIAG (SIM14) to cancel the trouble. |
| H5 | 01 | Content | 5-time continuous POD1 not-reaching jam detection |
| | | Detail | 5-time continuous POD1 not-reaching jam detection |
| | | Cause | A fusing section jam is not properly removed. (Jam paper remains.)<br>POD1 sensor trouble, or harness disconnection<br>Improper installation of fusing unit |
| | | Check and remedy | Check jam paper in the fusing section. (winding, etc.)<br>Check POD1 sensor harness, and check the fusing unit installation.<br>Use DIAG (SIM14) to cancel the trouble. |
| L1 | 00 | Content | Scanner feed trouble |
| | | Details | Scanner feed is not completed within the specified time. |
| | | Cause | Scanner unit abnormality<br>Scanner wire disconnection |
| | | Check & Remedy | Check scanning with SIM 1-1. |

| MAIN | SUB | | |
|---|---|---|---|
| L3 | 00 | Content | Scanner return trouble |
| | | Details | Scanner return is not completed within the specified time. |
| | | Cause | Scanner unit abnormality<br>Scanner wire disconnection |
| | | Check & Remedy | Check scanning with SIM 1-1. |
| L4 | 01 | Content | Main motor lock detection |
| | | Detail | The motor lock signal is detected for 1.5sec during rotation of the main motor. |
| | | Cause | main motor trouble<br>Check connection of harness between the PCU PWB and the main motor.<br>Control circuit trouble |
| | | Check and remedy | Use DIAG (SIM25-1) to check the main motor operation.<br>Check harness and connector between the PCU PWB and the main motor. |
| | 02 | Content | Drum motor lock detection |
| | | Detail | The motor lock signal is detected for 1.5sec during rotation of the drum motor. |
| | | Cause | Drum motor trouble<br>Improper connection of harness between the PCU PWB and the drum motor.<br>Control circuit trouble |
| | | Check and remedy | Use DIAG (SIM25-1) to check the drum motor operation.<br>Check harness and connector between the PCU PWB and the drum motor. |
| L6 | 10 | Content | Polygon motor lock detection |
| | | Detail | It is judged that the polygon motor lock signal is not outputted.<br>Lock signal is checked in the interval of 10sec after starting the polygon motor, and it is judged that the polygon motor does not rotate normally. |
| | | Cause | The LSU connector or harness in the LSU is disconnected or broken.<br>Polygon motor trouble |
| | | Check and remedy | Use DIAG (SIM61-1) to check the polygon motor operation.<br>Check connector and harness connection.<br>Replace LSU. |
| L8 | 01 | Content | No fullwave signal |
| | | Detail | Full wave signal is not detected. |
| | | Cause | The PCU PWB connector or the power unit harness is disconnected or broken.<br>PCU PWB trouble<br>Power unit trouble |
| | | Check and remedy | Check connection of the harness and connector.<br>Replace PCU PWB.<br>Replace the power unit. |
| | 02 | Content | Full wave signal width abnormality |
| | | Detail | It is judged as full wave signal frequency abnormality.<br>(When the detection cycle is judged as 69Hz or above or 42.5Hz or below) |
| | | Cause | The connector or harness of the PCU PWB and the power PWB is disconnected.<br>PCU PWB trouble<br>Power unit trouble |
| | | Check and remedy | Check connection of the harness and connector.<br>Replace the PCU PWB.<br>Replace the power unit. |

| MAIN | SUB | | |
|---|---|---|---|
| U6 | 00 | Content | Desk/LCC communication trouble |
| | | Detail | Desk/LCC communication error<br>Communication cable test error after turning on the power or exiting DIAG. |
| | | Cause | Improper connection or disconnection of connector and harness<br>Desk control PWB trouble<br>Control PWB (PCU) trouble<br>Noise or interference |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check connection of the harness and connector in the communication line. |
| | 01 | Content | Desk/LCC No. 1 tray lift-up trouble |
| | | Detail | Desk/LCC No. 1 tray lift-up trouble |
| | | Cause | Sensor trouble<br>Desk control PWB trouble<br>Gear breakage<br>Lift-up motor trouble |
| | | Check and remedy | Use DIAG (SIM4-2) to check the lift-up sensor detection.<br>Use DIAG (SIM4-3) to check the lift-up motor operation. |
| | 02 | Content | Desk No. 2 tray/LCC1 lift-up trouble |
| | | Detail | Desk No. 2 tray/LCC lift-up trouble |
| | | Cause | Sensor trouble<br>Desk control PWB trouble<br>Gear breakage<br>Lift-up motor trouble |
| | | Check and remedy | Use DIAG (SIM4-2) to check the lift-up sensor detection.<br>Use DIAG (SIM4-3) to check the lift-up motor operation. |
| | 03 | Content | Desk No. 3 tray/LCC2 lift-up trouble |
| | | Detail | Desk no. 3 tray lift-up trouble |
| | | Cause | Sensor trouble<br>Desk control PWB trouble<br>Gear breakage<br>Lift-up motor trouble |
| | | Check and remedy | Use DIAG (SIM4-2) to check the lift-up sensor detection.<br>Use DIAG (SIM4-3) to check the lift-up motor operation. |
| | 10 | Content | Desk/LCC transport motor trouble |
| | | Detail | Desk/LCC transport motor operation trouble |
| | | Cause | Motor lock<br>Motor rpm abnormality<br>Overcurrent to the motor<br>Desk control PWB trouble |
| | | Check and remedy | Use DIAG (SIM4-3) to check the transport motor operation. |

| MAIN | SUB | | |
|---|---|---|---|
| EE | EL | Content | Auto developer adjustment trouble (Over-toner) |
| | | Detail | The sample data is at 68 or below when auto developer adjustment is performed. |
| | | Cause | Toner concentration sensor trouble<br>Charging voltage, developing voltage abnormality<br>Insufficient toner concentration<br>Developing unit trouble<br>PCU PWB trouble |
| | | Check and remedy | Use DIAG (SIM25-2) to perform auto developer adjustment. |
| | EU | Content | Auto developer adjustment trouble (Under-toner) |
| | | Detail | The sample data is of 168 or above when auto developer adjustment is performed. |
| | | Cause | Insufficient toner concentration<br>Charging voltage, developing voltage abnormality<br>Insufficient toner concentration<br>Developing unit trouble<br>PCU PWB trouble |
| | | Check and remedy | Use DIAG (SIM25-2) to perform auto developer adjustment. |
| F9 | 02 | Content | PRT Centro port check error |
| | | Detail | Controller Centro port trouble |
| | | Cause | Centro port trouble<br>Controller PWB trouble |
| | | Check and remedy | Replace the Controller PWB. |
| | 03 | Content | NIC port check error |
| | | Detail | NIC port check error |
| | | Cause | NIC port trouble<br>NIC PWB trouble<br>Controller PWB trouble |
| | | Check and remedy | Replace the NIC PWB.<br>Replace the Controller PWB. |
| U1 | 01 | Content | FAX Battery abnormality |
| | | Detail | Backup SRAM battery voltage fall |
| | | Cause | Battery life<br>Battery circuit abnormality |
| | | Check and remedy | Check that the battery voltage is about 2.5V or above.<br>Check the battery circuit. |
| | 02 | Content | RTC read abnormality (common with FAX, on ICU PWB) |
| | | Details | The value read from RTC on ICU PWB is [EE]h (abnormal). |
| | | Cause | RTC circuit abnormality<br>Battery voltage fall<br>Battery circuit abnormality |
| | | Check & Remedy | Set the time again with key operation, and check that time advances properly.<br>Check RTC circuit.<br>Check that battery voltage is about 2.5V or above.<br>Check battery circuit. |

| MAIN | SUB | | |
|---|---|---|---|
| U2 | 00 | Content | EEPROM read/write error (Controller) |
| | | Detail | EEPROM write error |
| | | Cause | EEPROM trouble<br>EEPROM is not initialized.<br>Controller PWB EEPROM access circuit trouble |
| | | Check and remedy | Check that EEPROM is properly inserted.<br>Save the counter/adjustment values with the DIAG simulation.<br>Use DIAG (SIM16) to cancel U2 trouble.<br>Replace the Controller PWB. |
| | 11 | Content | Counter check sum error (Controller) |
| | | Detail | Counter data area check sum error |
| | | Cause | EEPROM trouble<br>Control circuit trouble by noise<br>Controller PWB EEPROM access circuit trouble |
| | | Check and remedy | Check that EEPROM is properly inserted.<br>Save the counter/adjustment values with the DIAG simulation.<br>Use DIAG (SIM16) to cancel U2 trouble.<br>Replace the Controller PWB. |
| | 12 | Content | Adjustment value check sum error (Controller) |
| | | Detail | Adjustment data area check sum error |
| | | Cause | EEPROM trouble<br>Control circuit trouble by noise<br>Controller PWB EEPROM access circuit trouble |
| | | Check and remedy | Check that EEPROM is properly inserted.<br>Save the counter/adjustment values with the DIAG simulation.<br>Use DIAG (SIM16) to cancel U2 trouble.<br>Replace the Controller PWB. |
| | 80 | Content | EEPROM read/write error (Scanner) |
| | | Details | Scanner EEPROM write error |
| | | Cause | EEPROM abnormality<br>EEPROM which is not initialized is installed.<br>Hang of control circuit due to noises<br>Scanner PWB EEPROM access circuit abnormality |
| | | Check & Remedy | Check that EEPROM is set properly.<br>Record counter/adjustment values with the simulation to protect the data from being deleted.<br>Cancel U2 trouble with SIM 16.<br>Replace scanner PWB. |
| | 81 | Content | Memory check sum error (Scanner) |
| | | Details | Scanner memory check sum error |
| | | Cause | EEPROM trouble<br>Control circuit freeze by noises<br>Scanner PWB EEPROM access circuit trouble |
| | | Check & Remedy | Check that EEPROM is set properly.<br>Record counter/adjustment values with the simulation to protect the data from being deleted.<br>Cancel U2 trouble with SIM 16.<br>Replace scanner PWB. |

| MAIN | SUB | | |
|---|---|---|---|
| U2 | 90 | Content | EEPROM read/write error (PCU) |
| | | Detail | PCU EEPROM write error |
| | | Cause | EEPROM trouble<br>EEPROM is not initialized.<br>Hang of control circuit due to noises<br>PCU PWB EEPROM access circuit trouble |
| | | Check and remedy | Check that EEPROM is properly inserted.<br>Save the counter/adjustment values with the DIAG simulation.<br>Use DIAG (SIM16) to cancel U2 trouble.<br>Replace the Controller PWB. |
| | 91 | Content | Memory check sum error (PCU) |
| | | Detail | PCU memory check sum error |
| | | Cause | EEPROM trouble<br>EEPROM is not initialized.<br>PCU PWB EEPROM access circuit trouble<br>Uninitialized EEPROM installed. |
| | | Check and remedy | Check that EEPROM is properly inserted.<br>Save the counter/adjustment values with the DIAG simulation.<br>Use DIAG (SIM16) to cancel U2 trouble.<br>Replace the Controller PWB. |
| U7 | 00 | Content | RIC communication trouble |
| | | Detail | RIC communication trouble<br>Communication cable test error after turning on the power or exiting DIAG. |
| | | Cause | Disconnection of connector and harness<br>RTC control PWB trouble<br>Control PWB (Controller) trouble<br>Noise or interference |
| | | Check and remedy | Canceled by turning OFF/ON the power.<br>Check connector and harness in the communication line. |
| PF | 00 | Content | RIC copy inhibit signal is received. |
| | | Detail | Copy inhibit command from RIM (host) is received. |
| | | Cause | Judged by the host. |
| | | Check and remedy | Inform to the host. |

## 3. Network communication error

•Error code table

| Error code | Content of error |
|---|---|
| CE-01 | The print server card (AR-NC5J) is broken down or is not installed. |
| CE-02 | The specified mail server or FTP server is not found. |
| CE-03 | Communication with the specified server is interrupted during image transmission. |
| CE-04 | The account name or the password for the FTP server is invalid. |
| CE-05 | The directory of the FTP server is invalid. |
| CE-00 | A communication error other than the above is generated, such as NIC cable disconnection |

# 4. Operations top in trouble

## A. Troubles where the machine can be operated depending on the conditions (Include Multi Function)

| Trouble | Judgment block | Trouble code | Operation-possible mode | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Copy read (interruption, etc.) | FAX send | Email send | FAX print | Print | List print |
| Scanner section troubles (Mirror motor, lens, copy lamp) | SCANNER | L1,L3,U2 (80,81) | X | X | X | O | O | O |
| FAX board trouble | Controller/ FAX | F6,F7 | O | X | O | X | O | O |
| FAX power OFF | Controller | | O | X | O | X | O | O |
| Network error | Controller | CE | O | O | X | O | O | O |
| Staple trouble | PCU | F1(10) | △1 | O | O | △1 | △1 | △1 |
| Paper feed tray trouble | PCU | F3, U6 (Desk) | △2 | O | O | △2 | △2 | △2 |
| PCU section troubles (Motor, fusing, etc.) | PCU | | X | O | O | X | X | X |
| After-work trouble | PCU | | △3 | O | O | △3 | △3 | △3 |
| Laser trouble | PCU | E7 (02 only), L6 | X | O | O | X | X | X |
| HDD trouble | Controller | E7 (03) | X | X | X | X | X | X |
| CCD troubles (Shading, etc.) | SCANNER | E7 (10, 11, 13) | X | X | X | O | O | O |
| Scanner communication trouble | Controller | E7 (80) | X | X | X | O | O | O |
| PCU communication trouble | Controller | E7 (90) | X | O | O | X | X | X |
| Backup battery voltage fall | Controller | U1 (01, 02) | O | X | X | O | O | O |

O : Operation possible X : Operation impossible △ : Operation possible depending on conditions

△1 :Operation possible except for the staple mode
△2 :Operation possible except for the trouble tray
△3 :Operation possible except for the trouble paper exit section

## B. Operation inhibited

| Trouble | Judgment block | Trouble code | Operation-possible mode | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Copy read (interruption, etc.) | FAX send | Email send | FAX print | Print | List print |
| Memory trouble (Expansion RAM not installed, etc.) | Controller | U2 (00, 11, 12) | X | X | X | X | X | X |
| External communication invalid (RIC) | Controller | U7, PF | X | X | X | X | X | X |
| Image memory trouble, decode error | Controller | E7(01, 06) | X | X | X | X | X | X |

X : Operation impossible

## C. Operation mode in FAX send/receive operations

| Trouble | Trouble code | Operation enable mode | | | | |
|---|---|---|---|---|---|---|
| | | Send reservation | Print | Send call | Receive call | Note |
| PCU general troubles | | O | X | O | O Note | Possibly causing memory full. |
| Paper feed tray trouble | F3,U6 | O | △ 1 | O | O | |
| Paper exit section trouble | F1 | O | △ 3 | O | O | |
| Scanner general troubles | | X | O | O | O | |
| FAX trouble | F6,F7 | X | X | X | X | |
| ICU trouble | E7(01,06,80,90) | X | X | X | X | |
| ICU memory error | U2(00,11,12) | X | X | X | X | |
| RIC external communication trouble, PF | U7 | X | X | X | X | |
| Backup battery voltage fall | U1 | X | △ 2 | X Note | X | Transfer enable |
| Door open | | O | X | O | O Note | Possibly causing memory full. |
| Toner empty | | O | X | O | O Note | Possibly causing memory full. |
| No process cartridge, etc. | | O | X | O | O Note | Possibly causing memory full. |
| Paper empty | | O | X | O | O Note | Possibly causing memory full. |
| Paper jam | | O | X | O | O Note | Possibly causing memory full. |
| Document jam | | X | O | O | O | |
| Simulation | | X | X | X | X | |
| Key operation (Communication disable) | | X | X | X | X | |

O : Operation enable X : Operation disable

△ 1 : Enable in other than trouble tray
△ 2 : Go to FAX status check menu, and printing of list is allowed.
: Received document is outputted.
△ 3 : Paper exit enable to other tray than trouble one.

## D. Trouble mode process

| | |
|---|---|
| Machine operation possible depending on conditions | Operations except for the trouble mode are possible (READY).<br>For the mode where operations are impossible, only setup can be allowed, and the message is provided to show that operations are impossible. (NOT READY in this case.)<br>**(Display)**<br>A dialog is shown in case of a trouble. For the mode where operations are possible, the OK button is added to the message. For the mode where operations are impossible, the OK button is not shown, and the process to cancel is indicated. |
| Machine operation is impossible | The trouble display is always shown, and all setup operations are invalid. |

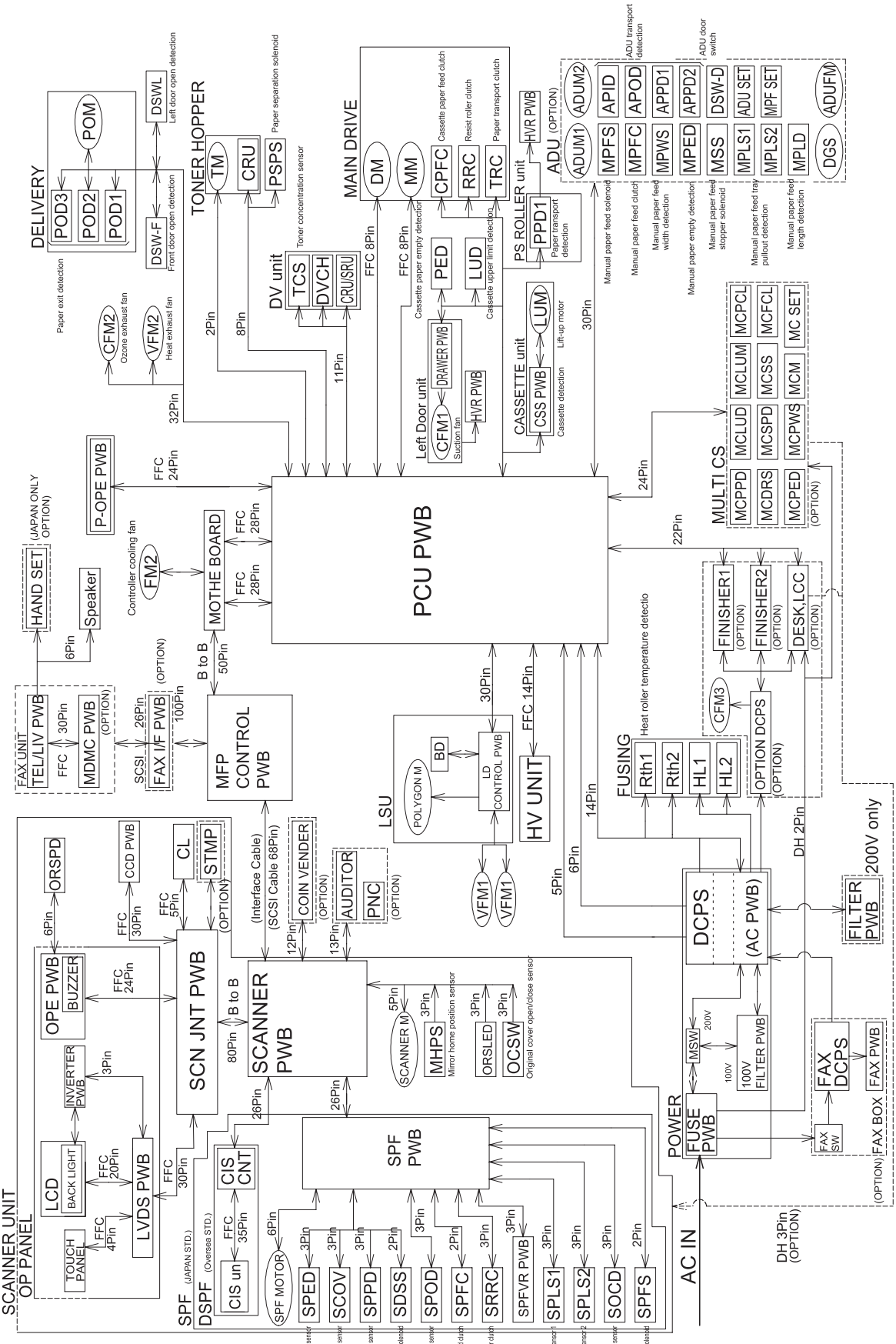
## E. Writing to the trouble memory

In this series, the simulation (diag) allows to select whether the same trouble is written to the trouble memory when it occurs. If the DIAG simulation is set as above, when any trouble occurs, its hysteresis is written to the trouble memory. DIAG(SIM 26-35)

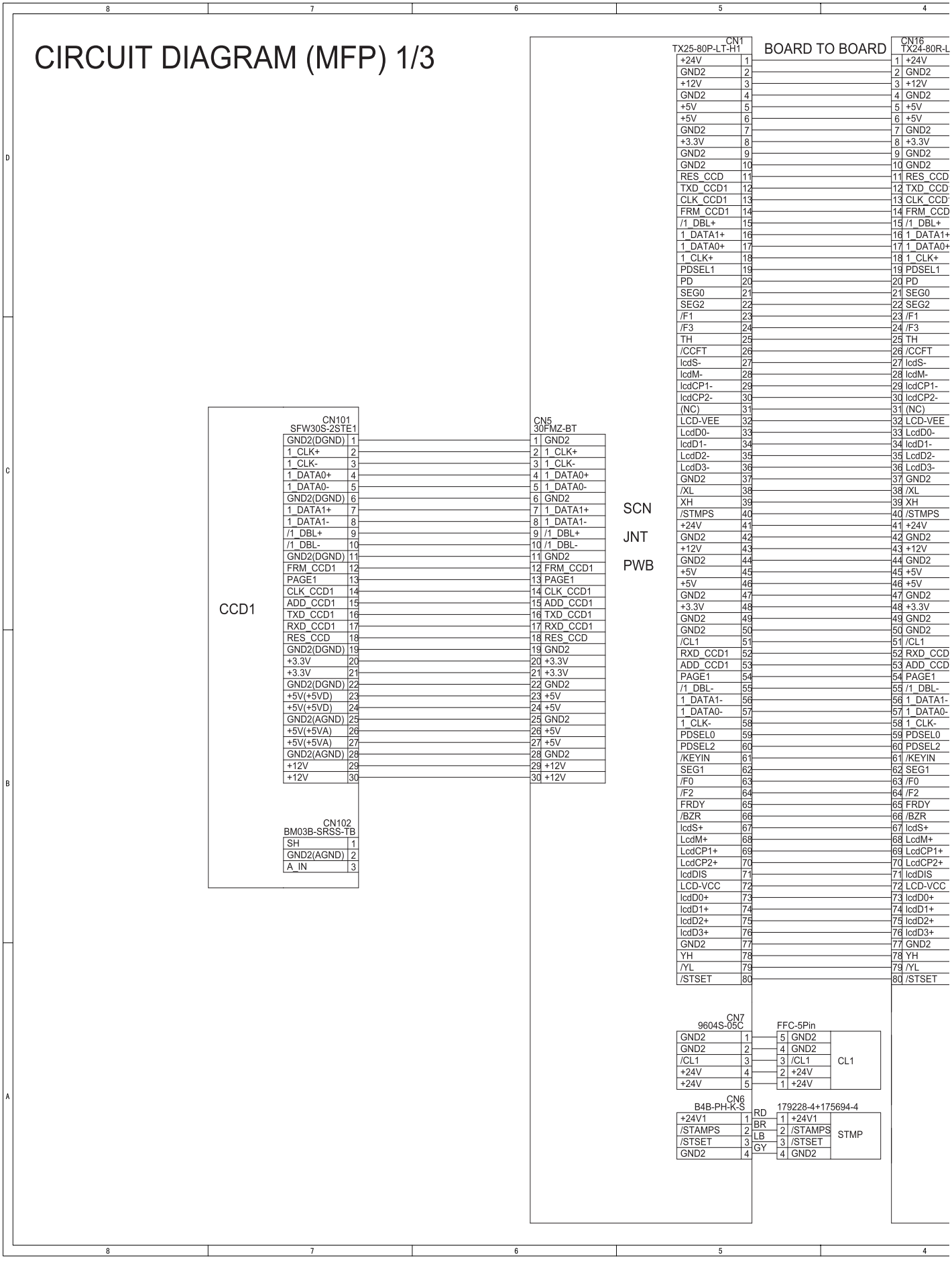
0: The same trouble as the previous one is not recorded. (Default)
1: When a trouble occurs, it is written to the trouble memory without exception.

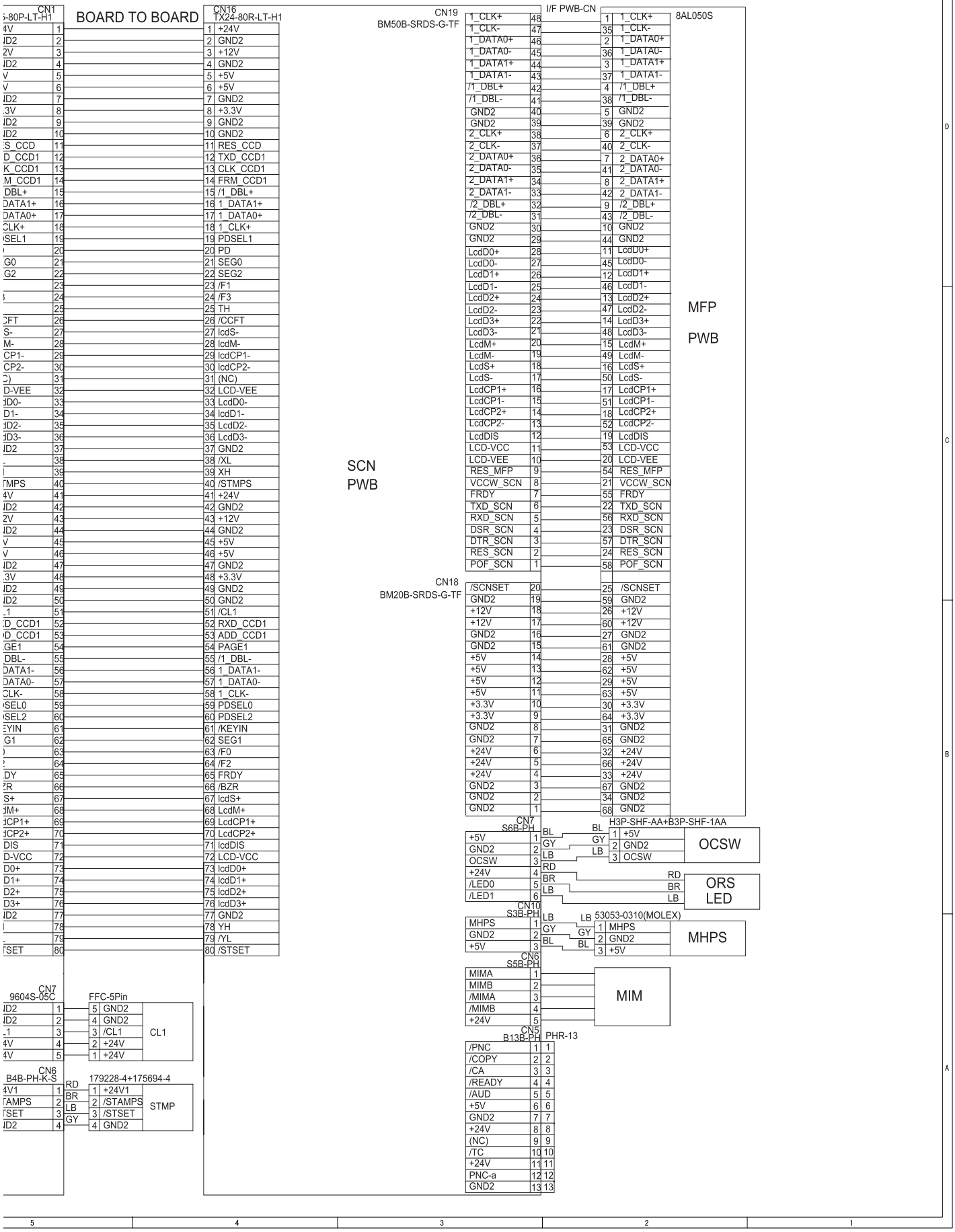
# [12] ELECTRICAL SECTION

## 1. Block Diagram

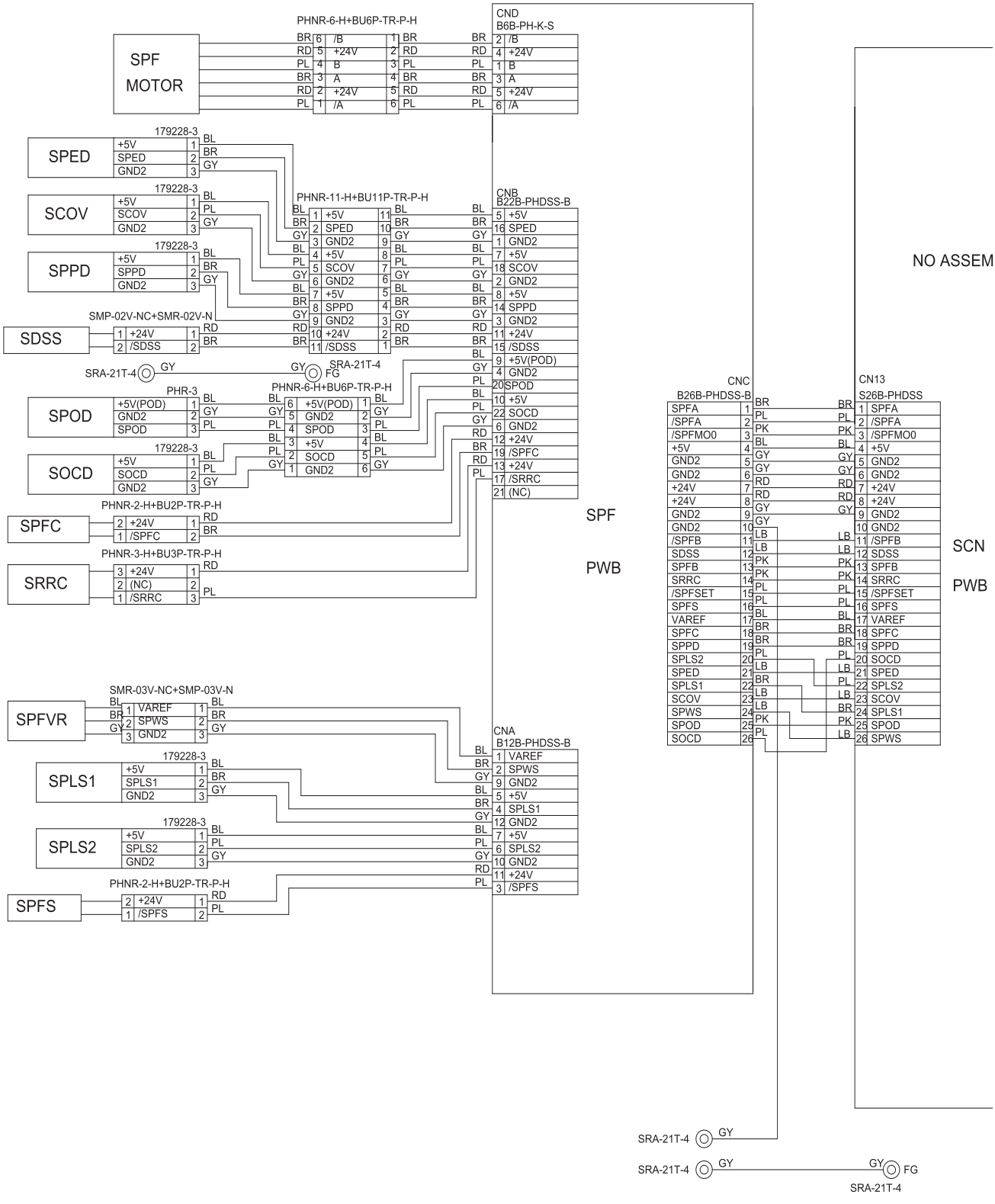


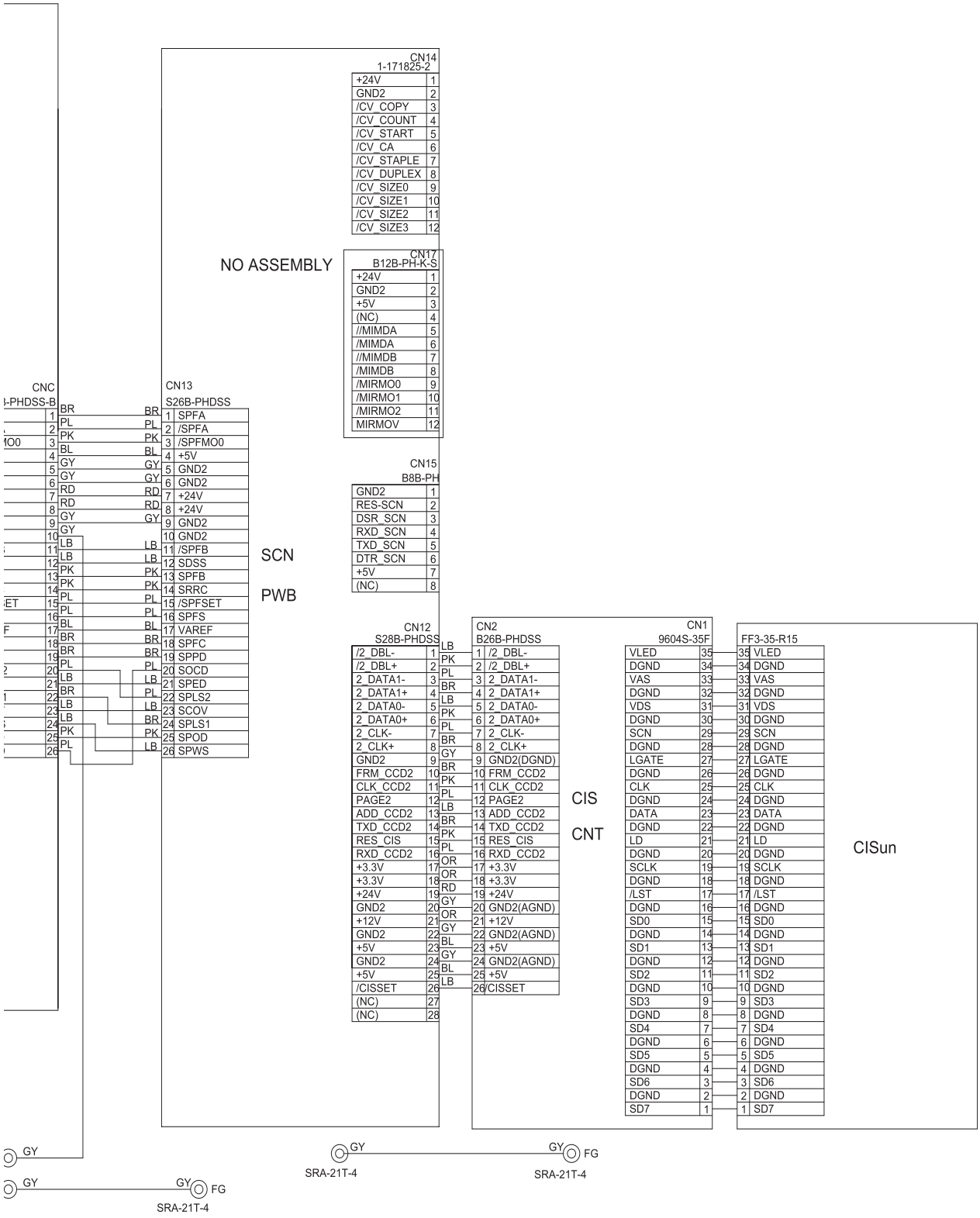
## 2. Circuit Diagram



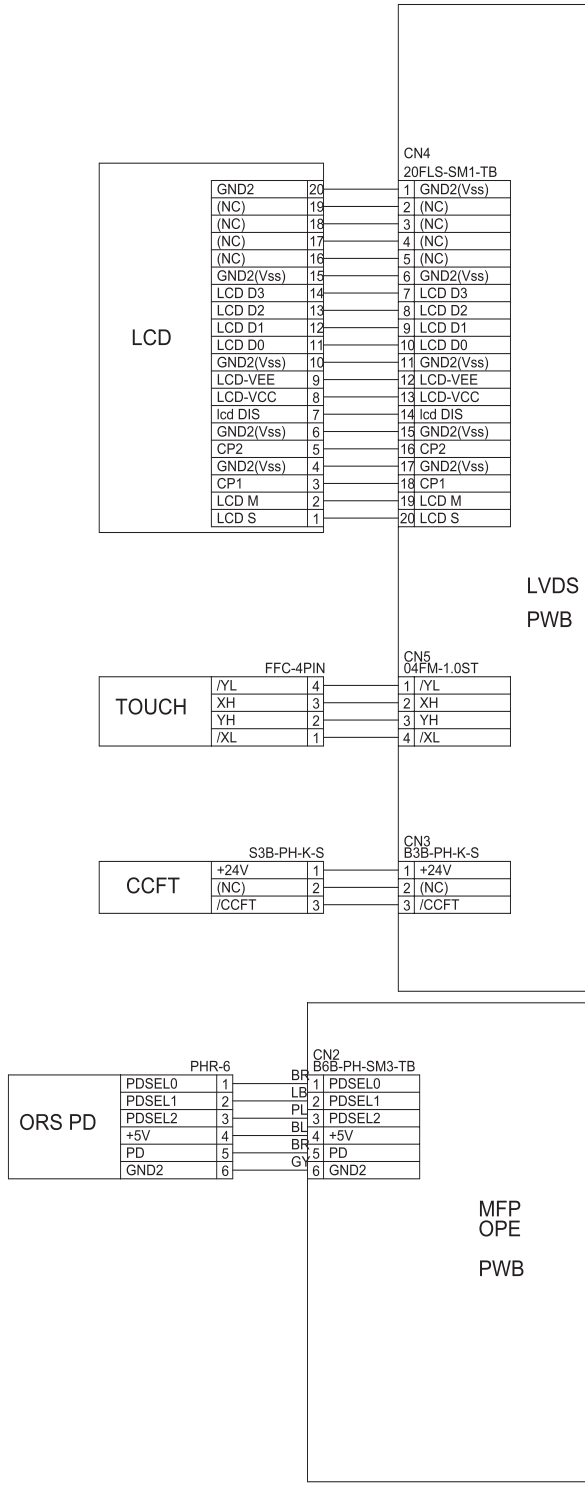

BOARD TO BOARD
CN16
TX24-80R-LT-H1
CN1
SCN
PWB
CN19
BM50B-SRDS-G-TF
CN18
BM20B-SRDS-G-TF
I/F PWB-CN
8AL050S
MFP
PWB
CN7
S6B-PH
H3P-SHF-AA+B3P-SHF-1AA
OCSW
ORS
LED
CN10
S3B-PH
53053-0310(MOLEX)
MHPS
CN6
S5B-PH
MIM
CN5
B13B-PH
PHR-13
CN7
9604S-05C
FFC-5Pin
CL1
CN6
B4B-PH-K-S
179228-4+175694-4
STMP

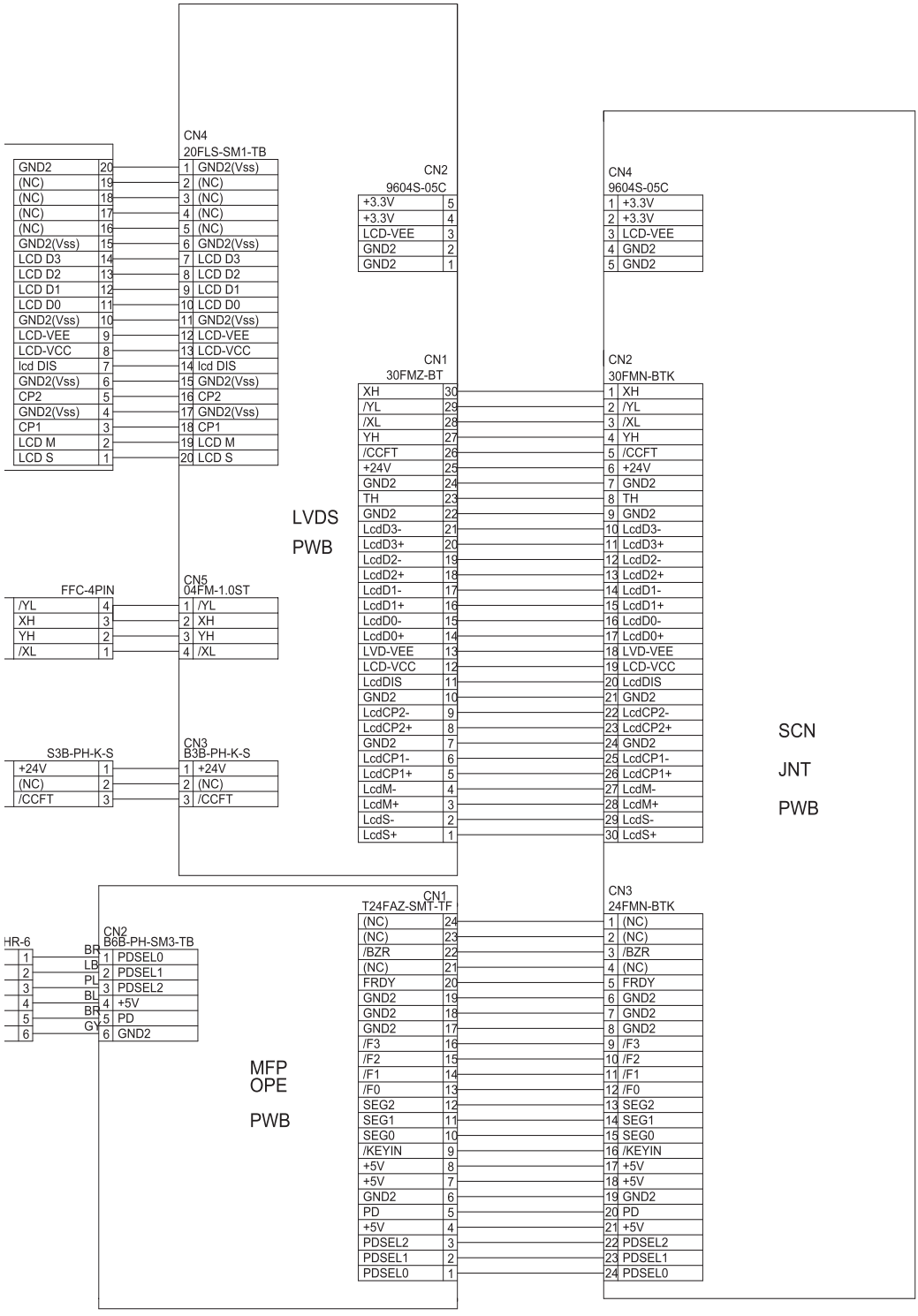
# CIRCUIT DIAGRAM (MFP) 2/3



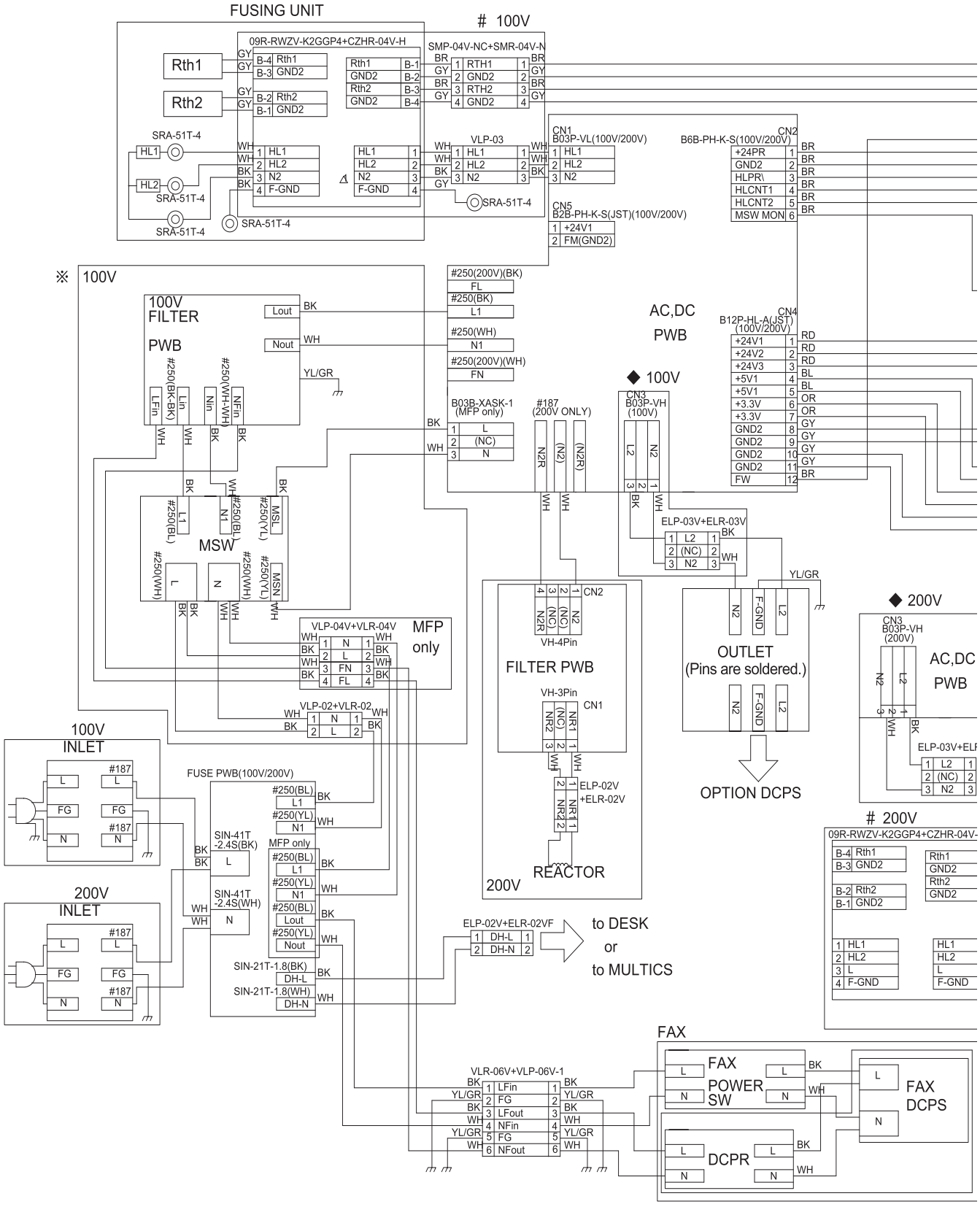

CN14
1-171825-2
+24V 1
GND2 2
/CV_COPY 3
/CV_COUNT 4
/CV_START 5
/CV_CA 6
/CV_STAPLE 7
/CV_DUPLEX 8
/CV_SIZE0 9
/CV_SIZE1 10
/CV_SIZE2 11
/CV_SIZE3 12
NO ASSEMBLY
CN17
B12B-PH-K-S
+24V 1
GND2 2
+5V 3
(NC) 4
//MIMDA 5
/MIMDA 6
//MIMDB 7
/MIMDB 8
/MIRMO0 9
/MIRMO1 10
/MIRMO2 11
MIRMOV 12
CN15
B8B-PH
GND2 1
RES-SCN 2
DSR_SCN 3
RXD_SCN 4
TXD_SCN 5
DTR_SCN 6
+5V 7
(NC) 8
CNC
-PHDSS-B
CN13
S26B-PHDSS
1 BR BR 1 SPFA
2 PL PL 2 /SPFA
3 PK PK 3 /SPFMO0
4 BL BL 4 +5V
5 GY GY 5 GND2
6 GY GY 6 GND2
7 RD RD 7 +24V
8 RD RD 8 +24V
9 GY GY 9 GND2
10 GY 10 GND2
11 LB LB 11 /SPFB
12 LB LB 12 SDSS
13 PK PK 13 SPFB
14 PK PK 14 SRRC
15 PL PL 15 /SPFSET
16 PL PL 16 SPFS
17 BL BL 17 VAREF
18 BR BR 18 SPFC
19 BR BR 19 SPPD
20 PL PL 20 SOCD
21 LB LB 21 SPED
22 BR PL 22 SPLS2
23 LB LB 23 SCOV
24 LB BR 24 SPLS1
25 PK PK 25 SPOD
26 PL LB 26 SPWS
SCN
PWB
CN12
S28B-PHDSS
/2_DBL- 1 LB
/2_DBL+ 2 PK
2_DATA1- 3 PL
2_DATA1+ 4 BR
2_DATA0- 5 LB
2_DATA0+ 6 PK
2_CLK- 7 PL
2_CLK+ 8 BR
GND2 9 GY
FRM_CCD2 10 BR
CLK_CCD2 11 PK
PAGE2 12 PL
ADD_CCD2 13 LB
TXD_CCD2 14 BR
RES_CIS 15 PK
RXD_CCD2 16 PL
+3.3V 17 OR
+3.3V 18 OR
+24V 19 RD
GND2 20 GY
+12V 21 OR
GND2 22 GY
+5V 23 BL
GND2 24 GY
+5V 25 BL
/CISSET 26 LB
(NC) 27
(NC) 28
CN2
B26B-PHDSS
1 /2_DBL-
2 /2_DBL+
3 2_DATA1-
4 2_DATA1+
5 2_DATA0-
6 2_DATA0+
7 2_CLK-
8 2_CLK+
9 GND2(DGND)
10 FRM_CCD2
11 CLK_CCD2
12 PAGE2
13 ADD_CCD2
14 TXD_CCD2
15 RES_CIS
16 RXD_CCD2
17 +3.3V
18 +3.3V
19 +24V
20 GND2(AGND)
21 +12V
22 GND2(AGND)
23 +5V
24 GND2(AGND)
25 +5V
26 /CISSET
CIS
CNT
CN1
9604S-35F
VLED 35
DGND 34
VAS 33
DGND 32
VDS 31
DGND 30
SCN 29
DGND 28
LGATE 27
DGND 26
CLK 25
DGND 24
DATA 23
DGND 22
LD 21
DGND 20
SCLK 19
DGND 18
/LST 17
DGND 16
SD0 15
DGND 14
SD1 13
DGND 12
SD2 11
DGND 10
SD3 9
DGND 8
SD4 7
DGND 6
SD5 5
DGND 4
SD6 3
DGND 2
SD7 1
FF3-35-R15
35 VLED
34 DGND
33 VAS
32 DGND
31 VDS
30 DGND
29 SCN
28 DGND
27 LGATE
26 DGND
25 CLK
24 DGND
23 DATA
22 DGND
21 LD
20 DGND
19 SCLK
18 DGND
17 /LST
16 DGND
15 SD0
14 DGND
13 SD1
12 DGND
11 SD2
10 DGND
9 SD3
8 DGND
7 SD4
6 DGND
5 SD5
4 DGND
3 SD6
2 DGND
1 SD7
CISun
GY
GY
GY
FG
SRA-21T-4
GY
GY
FG
SRA-21T-4

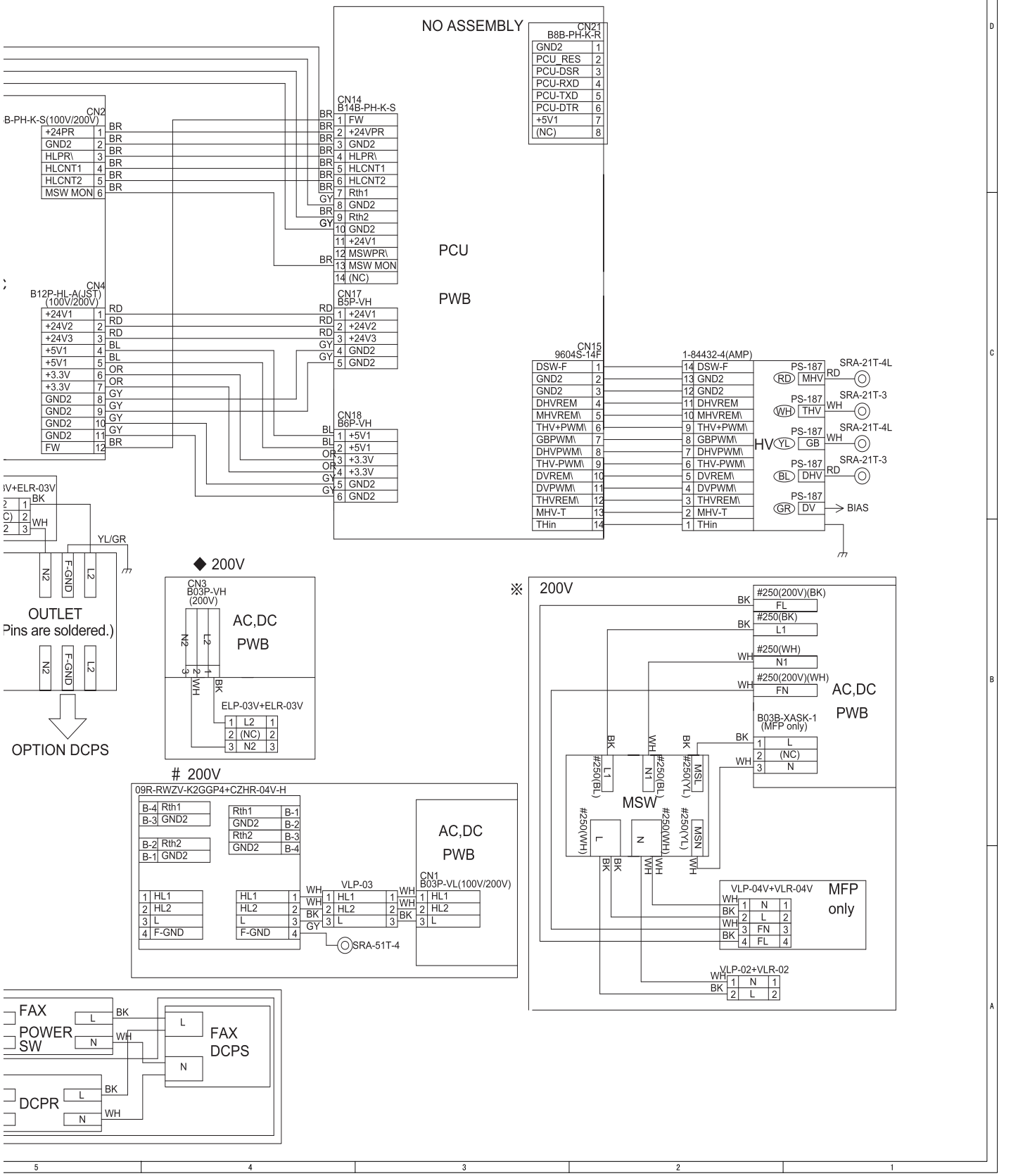
# CIRCUIT DIAGRAM (MFP) 3/3




CN4
20FLS-SM1-TB
GND2 20 | 1 GND2(Vss)
(NC) 19 | 2 (NC)
(NC) 18 | 3 (NC)
(NC) 17 | 4 (NC)
(NC) 16 | 5 (NC)
GND2(Vss) 15 | 6 GND2(Vss)
LCD D3 14 | 7 LCD D3
LCD D2 13 | 8 LCD D2
LCD D1 12 | 9 LCD D1
LCD D0 11 | 10 LCD D0
GND2(Vss) 10 | 11 GND2(Vss)
LCD-VEE 9 | 12 LCD-VEE
LCD-VCC 8 | 13 LCD-VCC
lcd DIS 7 | 14 lcd DIS
GND2(Vss) 6 | 15 GND2(Vss)
CP2 5 | 16 CP2
GND2(Vss) 4 | 17 GND2(Vss)
CP1 3 | 18 CP1
LCD M 2 | 19 LCD M
LCD S 1 | 20 LCD S
CN2
9604S-05C
+3.3V 5
+3.3V 4
LCD-VEE 3
GND2 2
GND2 1
CN4
9604S-05C
1 +3.3V
2 +3.3V
3 LCD-VEE
4 GND2
5 GND2
CN1
30FMZ-BT
XH 30
/YL 29
/XL 28
YH 27
/CCFT 26
+24V 25
GND2 24
TH 23
GND2 22
LcdD3- 21
LcdD3+ 20
LcdD2- 19
LcdD2+ 18
LcdD1- 17
LcdD1+ 16
LcdD0- 15
LcdD0+ 14
LVD-VEE 13
LCD-VCC 12
LcdDIS 11
GND2 10
LcdCP2- 9
LcdCP2+ 8
GND2 7
LcdCP1- 6
LcdCP1+ 5
LcdM- 4
LcdM+ 3
LcdS- 2
LcdS+ 1
CN2
30FMN-BTK
1 XH
2 /YL
3 /XL
4 YH
5 /CCFT
6 +24V
7 GND2
8 TH
9 GND2
10 LcdD3-
11 LcdD3+
12 LcdD2-
13 LcdD2+
14 LcdD1-
15 LcdD1+
16 LcdD0-
17 LcdD0+
18 LVD-VEE
19 LCD-VCC
20 LcdDIS
21 GND2
22 LcdCP2-
23 LcdCP2+
24 GND2
25 LcdCP1-
26 LcdCP1+
27 LcdM-
28 LcdM+
29 LcdS-
30 LcdS+
LVDS
PWB
FFC-4PIN
/YL 4
XH 3
YH 2
/XL 1
CN5
04FM-1.0ST
1 /YL
2 XH
3 YH
4 /XL
S3B-PH-K-S
+24V 1
(NC) 2
/CCFT 3
CN3
B3B-PH-K-S
1 +24V
2 (NC)
3 /CCFT
SCN
JNT
PWB
HR-6
1
2
3
4
5
6
BR
LB
PL
BL
BR
GY
CN2
B6B-PH-SM3-TB
1 PDSEL0
2 PDSEL1
3 PDSEL2
4 +5V
5 PD
6 GND2
CN1
T24FAZ-SMT-TF
(NC) 24
(NC) 23
/BZR 22
(NC) 21
FRDY 20
GND2 19
GND2 18
GND2 17
/F3 16
/F2 15
/F1 14
/F0 13
SEG2 12
SEG1 11
SEG0 10
/KEYIN 9
+5V 8
+5V 7
GND2 6
PD 5
+5V 4
PDSEL2 3
PDSEL1 2
PDSEL0 1
CN3
24FMN-BTK
1 (NC)
2 (NC)
3 /BZR
4 (NC)
5 FRDY
6 GND2
7 GND2
8 GND2
9 /F3
10 /F2
11 /F1
12 /F0
13 SEG2
14 SEG1
15 SEG0
16 /KEYIN
17 +5V
18 +5V
19 GND2
20 PD
21 +5V
22 PDSEL2
23 PDSEL1
24 PDSEL0
MFP
OPE
PWB

# CIRCUIT DIAGRAM [ENGINE 3] 3/4




NO ASSEMBLY
PCU
PWB
CN21
B8B-PH-K-R
GND2 1
PCU_RES 2
PCU-DSR 3
PCU-RXD 4
PCU-TXD 5
PCU-DTR 6
+5V1 7
(NC) 8
CN2
B-PH-K-S(100V/200V)
+24PR 1
GND2 2
HLPR\ 3
HLCNT1 4
HLCNT2 5
MSW MON 6
CN14
B14B-PH-K-S
1 FW
2 +24VPR
3 GND2
4 HLPR\
5 HLCNT1
6 HLCNT2
7 Rth1
8 GND2
9 Rth2
10 GND2
11 +24V1
12 MSWPR\
13 MSW MON
14 (NC)
CN4
B12P-HL-A(JST)
(100V/200V)
+24V1 1
+24V2 2
+24V3 3
+5V1 4
+5V1 5
+3.3V 6
+3.3V 7
GND2 8
GND2 9
GND2 10
GND2 11
FW 12
CN17
B5P-VH
1 +24V1
2 +24V2
3 +24V3
4 GND2
5 GND2
CN18
B6P-VH
1 +5V1
2 +5V1
3 +3.3V
4 +3.3V
5 GND2
6 GND2
CN15
9604S-14F
DSW-F 1
GND2 2
GND2 3
DHVREM 4
MHVREM\ 5
THV+PWM\ 6
GBPWM\ 7
DHVPWM\ 8
THV-PWM\ 9
DVREM\ 10
DVPWM\ 11
THVREM\ 12
MHV-T 13
THin 14
1-84432-4(AMP)
14 DSW-F
13 GND2
12 GND2
11 DHVREM
10 MHVREM\
9 THV+PWM\
8 GBPWM\
7 DHVPWM\
6 THV-PWM\
5 DVREM\
4 DVPWM\
3 THVREM\
2 MHV-T
1 THin
HV
PS-187
MHV
THV
GB
DHV
DV
SRA-21T-4L
SRA-21T-3
SRA-21T-4L
SRA-21T-3
BIAS
RD
WH
YL
BL
GR
BK
YL/GR
N2
F-GND
L2
OUTLET
Pins are soldered.)
OPTION DCPS
◆ 200V
CN3
B03P-VH
(200V)
AC,DC
PWB
ELP-03V+ELR-03V
1 L2 1
2 (NC) 2
3 N2 3
※ 200V
#250(200V)(BK)
FL
#250(BK)
L1
#250(WH)
N1
#250(200V)(WH)
FN
AC,DC
PWB
B03B-XASK-1
(MFP only)
1 L
2 (NC)
3 N
MSW
#250(BL)
#250(WH)
#250(YL)
MSL
MSN
L
N
VLP-04V+VLR-04V
MFP
only
VLP-02+VLR-02
# 200V
09R-RWZV-K2GGP4+CZHR-04V-H
B-4 Rth1
B-3 GND2
B-2 Rth2
B-1 GND2
Rth1 B-1
GND2 B-2
Rth2 B-3
GND2 B-4
1 HL1
2 HL2
3 L
4 F-GND
VLP-03
AC,DC
PWB
CN1
B03P-VL(100V/200V)
SRA-51T-4
FAX
POWER
SW
DCPR
FAX
DCPS

## CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

## CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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# SHARP PARTS GUIDE

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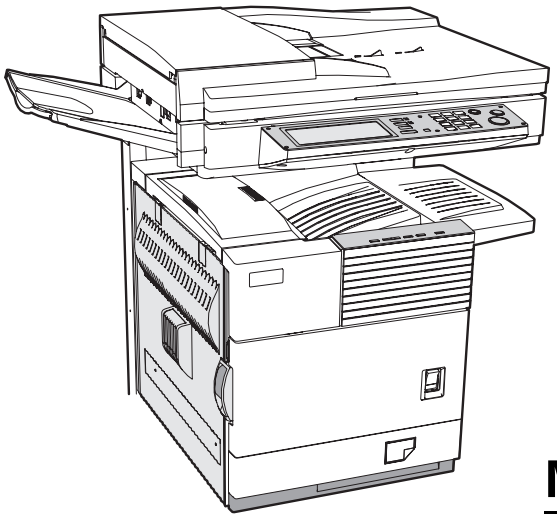

## LASER PRINTER (MULTI FUNCTION)

**MODEL** AR-M350
AR-M450
**OPTION:** AR-EF1
AR-M11
AR-RK1

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12 Controller BOX unit
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30 Optical unit 1[AR-EF1]
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32 Lamp unit[AR-EF1]
33 DSPF Assembly section[AR-EF1]
34 DSPF Paper feed unit[AR-EF1]
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36 DSPF CIS unit[AR-EF1]
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The AR-M350 / AR-M450 Parts Guide describes only the parts change from AR-P350 / AR-P450 Parts Guide. for the common parts,please refer to the AR-P350 / AR-P450(CODE : 00ZAR350LPP1/) Parts Guide.


**SHARP CORPORATION**



This document has been published to be used for after sales service only.
The contents are subject to change without notice.

## DEFINITION

The definition of each Rank is as follows and also noted in the list

A : Parts necessary to be stocked as High usage parts.

B : Parts necessary to be stocked as Standard usage parts.

C : Low usage parts.

D : Parts necessary for refurbish.

E : Unit parts recommended to be stocked for efficient after sales service.
Please note that the lead time for the said parts may be longer than normal parts.

S : Consumable parts.

Please note that the following parts used in Copier under the same description are classified into A or B Rank depending upon the place used.

Example: Gear made of Metal, Sprocket, Bearing, Belt made of Rubber, Spring clutch mechanism.

A Rank : The parts which may be with the revolution or loading.

B Rank : Parts similar to A Rank parts, but are not included in Rank A.

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

○ Other than this Parts Guide, please refer to documents Service Manual (including Circuit Diagram) of this model.

○ Please use the 13 digit code described in the right hand corner of front cover of the document, when you place an order.

○ For U.S. only-Use order codes provided in advertising literature. Do not order from parts department.

[Note] ∗ These parts are supplied by SMF.

---

## 1 Exteriors

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 5 | GCAB−0940FCZ2 | BA | N | D | Paper exit tray exterior |
| 11 | HPNLC0243FCZ1 | AP | N | D | Operation cabinet |
| 26 | CPNLH0020QS12 | AK | N | D | Model panel M350 [ARM350] |
| | CPNLH0020QS13 | AK | N | D | Model panel M450 [ARM450] |
| | CPNLH0020QS22 | AK | N | D | Model panel 350M [AR350M] |
| | CPNLH0020QS23 | AK | N | D | Model panel 450M [AR450M] |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## 12 Controller BOX unit

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 25 | LX−BZ0921FCZ1 | AE | N | C | Scanner Screw |
| 26 | XBPSD26P06000 | AA | | C | Screw (2.6×6) |
| 35 | LPLTM5765FCZ1 | AH | N | C | Control joint plate |
| 37 | PCÕVP1560FCZZ | AC | N | C | FAX I/F cover |
| 38 | PCÕVP1557FCZZ | AC | | C | LAN/option cover |
| 47 | XBPSD30P06000 | AA | | C | Screw (3×6) |
| 50 | XHBSE30P06000 | AA | | C | Screw (3×6) |
| 51 | XBBSD30P06000 | AA | | C | Screw (3×6) |
| 54 | VHi28F322L01F | BE | N | B | MFP flash ROM A J (28F322L01F) [Japan] |
| | VHi28F322L03F | BF | N | B | MFP flash ROM A EX (28F322L03F) [except Japan] |
| 55 | VHi28F322L02F | BF | N | B | MFP flash ROM B J (28F322L02F) [Japan] |
| | VHi28F322L04F | BL | N | B | MFP flash ROM B EX (28F322L04F) [except Japan] |
| 56 | LX−BZ0828FCZZ | AD | | C | Handle fixing screw |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
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| | | | | | |
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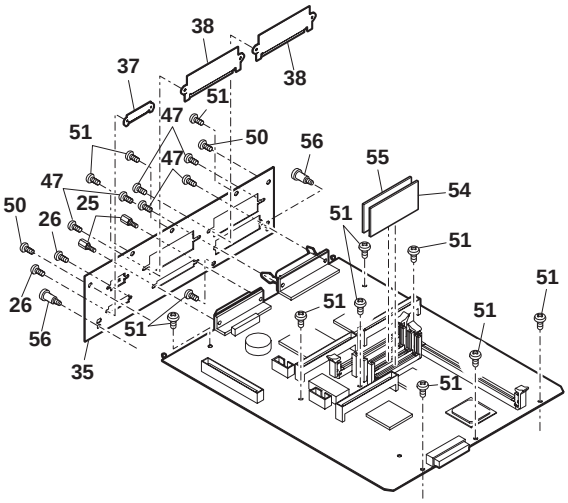
| | | | | | |
| | | | | | |

## 12 Controller BOX unit




FCP05045

## 17 Packing material & Accessories

| | NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| | | SPAKC6122DS18 | AU | N | D | Packing case | [ARM350][STCL,SRS,SRSSC] |
| | | SPAKC6122DS19 | AU | N | D | Packing case | [ARM350][China] |
| | | SPAKC6122DS17 | AU | N | D | Packing case | [ARM350][other countries] |
| | 5 | SPAKC6122DS21 | AU | N | D | Packing case | [ARM450][STCL,SRS,SRSSC] |
| | | SPAKC6122DS22 | AU | N | D | Packing case | [ARM450][China] |
| | | SPAKC6122DS20 | AU | N | D | Packing case | [ARM450][other countries] |
| | | SPAKC6118DS12 | AU | N | D | Packing case | [AR350M][Japan] |
| | | SPAKC6118DS13 | AU | N | D | Packing case | [AR450M][Japan] |
| | | PSHEP4927FCZZ | AM | N | D | Key sheet | [French] |
| | | PSHEP4927FCZ1 | AR | N | D | Key sheet | [Germany] |
| | | PSHEP4927FCZ2 | AM | N | D | Key sheet | [Spanish] |
| | | PSHEP4927FCZ3 | AR | N | D | Key sheet | [Italian] |
| | | PSHEP4927FCZ4 | AR | N | D | Key sheet | [Dutch] |
| | | PSHEP4927FCZ5 | AR | N | D | Key sheet | [Swedish] |
| | 13 | PSHEP4927FCZ6 | AR | N | D | Key sheet | [Norwegian] |
| | | PSHEP4927FCZ7 | AR | N | D | Key sheet | [Finnsh] |
| | | PSHEP4927FCZ8 | AR | N | D | Key sheet | [Danish] |
| | | PSHEP4927FCZ9 | AR | N | D | Key sheet | [Hungarian] |
| | | PSHEP4927FC10 | AR | N | D | Key sheet | [Czechoslovakia] |
| | | PSHEP4927FC11 | AR | N | D | Key sheet | [Polish] |
| | | TiNSE2181FCZZ | AT | N | D | Operation manual | [USA] |
| | | TiNSJ2076FCZZ | AQ | N | D | Operation manual COPY | [Japan] |
| | | TiNSE2077FCZZ | AQ | N | D | Operation manual COPY | [USA] |
| | | TiNSE2078FCZZ | AW | N | D | Operation manual COPY | [English] |
| | | TiNSF2079FCZZ | AW | N | D | Operation manual COPY | [French] |
| * | | TiNSG2080GHZZ | AS | N | D | Operation manual COPY | [German] |
| * | | TiNSE2081GHZZ | AS | N | D | Operation manual COPY | [U Kingdom] |
| | | TiNSS2082FCZZ | AW | N | D | Operation manual COPY | [Spanish] |
| * | | TiNSi2083GHZZ | AS | N | D | Operation manual COPY | [Italian] |
| * | | TiNSH2084GHZZ | AS | N | D | Operation manual COPY | [Dutch] |
| | | CiNSR2085FC51 | AS | N | D | Operation manual COPY | [Russian] |
| | | CiNSZ2086FC51 | AS | N | D | Operation manual COPY | [Arabic] |
| | | TiNSE2087FCZZ | AX | N | D | Operation manual COPY | [Hong Kong] |
| * | | TiNSW2089GHZZ | AS | N | D | Operation manual COPY | [Swedish] |
| * | | TiNSZ2090GHZZ | AS | N | D | Operation manual COPY | [Norwegian] |
| * | | TiNSZ2091GHZZ | AS | N | D | Operation manual COPY | [Finnsh] |
| * | | TiNSD2092GHZZ | AS | N | D | Operation manual COPY | [Danish] |
| * | | TiNSZ2093GHZZ | AS | N | D | Operation manual COPY | [Hungarian] |
| * | | TiNSZ2094GHZZ | AS | N | D | Operation manual COPY | [Czechoslovakia] |
| * | 20 | TiNSZ2095GHZZ | AS | N | D | Operation manual COPY | [Polish] |
| | | TiNSJ2118FCZZ | AN | N | D | Operation manual SCANNER | [Japan] |
| | | TiNSE2119FCZZ | AN | N | D | Operation manual SCANNER | [USA] |
| | | TiNSE2120FCZZ | AV | N | D | Operation manual SCANNER | [English] |
| | | TiNSF2121FCZZ | AV | N | D | Operation manual SCANNER | [French] |
| * | | TiNSG2122GHZZ | AS | N | D | Operation manual SCANNER | [German] |
| * | | TiNSE2123GHZZ | AS | N | D | Operation manual SCANNER | [U Kingdom] |
| | | TiNSS2124FCZZ | AV | N | D | Operation manual SCANNER | [Spanish] |
| * | | TiNSi2125GHZZ | AS | N | D | Operation manual SCANNER | [Italian] |
| * | | TiNSH2126GHZZ | AS | N | D | Operation manual SCANNER | [Dutch] |
| | | CiNSR2127FC51 | AR | N | D | Operation manual SCANNER | [Russian] |
| | | CiNSZ2128FC51 | AR | N | D | Operation manual SCANNER | [Arabic] |
| | | TiNSE2129FCZZ | AV | N | D | Operation manual SCANNER | [Hong Kong] |
| * | | TiNSW2131GHZZ | AS | N | D | Operation manual SCANNER | [Swedish] |
| * | | TiNSZ2132GHZZ | AS | N | D | Operation manual SCANNER | [Norwegian] |
| * | | TiNSZ2133GHZZ | AS | N | D | Operation manual SCANNER | [Finnsh] |
| * | | TiNSD2134GHZZ | AS | N | D | Operation manual SCANNER | [Danish] |
| * | | TiNSZ2135GHZZ | AS | N | D | Operation manual SCANNER | [Hungarian] |
| * | | TiNSZ2136GHZZ | AS | N | D | Operation manual SCANNER | [Czechoslovakia] |
| * | | TiNSZ2137GHZZ | AS | N | D | Operation manual SCANNER | [Polish] |

## 26 MFP Control PWB (ARM350/M450/350M/450M/ARM11)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | PCAPH0010GCZZ | AD | | D | Jumper (JM-2W-96) | [JP2,3,4,5,6,7] |
| 2 | PCŌVP1468FCZZ | AD | | D | FAX battery cover | |
| 3 | QCNCM0041QSZZ | AP | | C | Connector (TX25-100P12) | [CN2,9,12] |
| 4 | QCNCM1146FCZZ | AE | N | C | Connector (9A12-1034) | [CN14] |
| 5 | QCNCM1148FCZZ | AP | N | C | Connector (TX25100P6ST) | [CN16] |
| 6 | QCNCW0946FCZZ | AH | | C | Connector (36pin) | [CN1] |
| 7 | QCNCW1147FCZZ | AL | N | C | Connector (TX2450RLTH1) | [CN13] |
| 8 | QCNCW1149FCZZ | AN | N | C | Connector (8AL068S305C) | [CN8] |
| 9 | QFS-D132CQCZZ | AG | | A | Fuse (1.25/250T) | [F1] |
| 10 | QFSHB0028FCZZ | AC | | C | Fuse holder (TP00351-31) | [F1] |
| 11 | QPiN-0003GCZZ | AC | | C | Pin (T3B-SQ) | [JP2,3,4,5,6,7,] |
| 12 | QSŌCZ0001QSZZ | AL | | C | Socket (DMM168-FLAA2-3A133) | [CN3] |
| 13 | QSŌCZ0073FCZZ | AL | | C | Connector (72pin) | [CN4,5,6] |
| 14 | QSŌCZ0079FCZZ | AN | | C | Connector (100pin) | [AR350M/450M][CN7] |
| 15 | QSŌCZ6428ACZZ | AE | | C | IC socket (28pin) | [IC36] |
| 16 | RCRSP6676RCZZ | AG | | B | Crystal (32.768KHz) | [X6] |
| 17 | RCRUA0005FCZZ | AP | | B | Crystal (14.745) | [X7] |
| 18 | RCRUA0007FCZZ | AP | | B | Crystal (31.554) | [X4] |
| 19 | RCRUA0008FCZZ | AP | | B | Crystal (40.57M) | [X2] |
| 20 | RCRUA0009FCZZ | AP | | B | Crystal (66.666MHZ) | [X3,5] |
| 21 | RCRUA0012FCZZ | AP | | B | Crystal (66M) | [X1] |
| 22 | RFiLN0048FCZZ | AC | | C | Coil (BLM10B121SB) | [L2,3] |
| 23 | RFiLN0051FCZZ | AC | N | C | Coil (MMZ1608D121B) | [L25~30,33,34] |
| 24 | RMPTR4100ACZZ | AB | | B | Block resistor (10Ω×4) | [BR6~13,15~25,28,29] |
| | RMPTR4100ACZZ | AB | | B | Block resistor (10Ω×4) | [BR33~44,46,48,53~72] |
| 25 | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR1~5,14,26,27,30,31,32] |
| | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR74,76,78,80~102] |
| 26 | RMPTR4330ACZZ | AB | | B | Block resistor (33Ω×4) | [BR47,49,50,51,73,75,77,79] |
| 27 | RMPTR4472ACZZ | AB | | B | Block resistor (4.7KΩ×4) | [BR52,45] |
| 28 | UBATi0014FCZZ | AN | | B | Battery (CR2477-H01) | [BT1] |
| 29 | VCCCCZ1HH101J | AA | | C | Capacitor (50WV 100pF) | [C7,8,10,17,18,20,22,30,33] |
| | VCCCCZ1HH101J | AA | | C | Capacitor (50WV 100pF) | [C35,38,39,40,43,47,48,51] |
| 30 | VCCCCZ1HH220J | AA | | C | Capacitor (50WV 22pF) | [C61] |
| 31 | VCEAPH1HC105M | AC | | C | Capacitor (50WV 1μF) | [C181,188,205,206] |
| 32 | VCEAPS1AC227M | AD | | C | Capacitor (10WV 220μF) | [C309,310] |
| 33 | VCEAPS1CC106M | AC | | C | Capacitor (16WV 10μF) | [C1,6,21,75,94,111,125,165] |
| | VCEAPS1CC106M | AC | | C | Capacitor (16WV 10μF) | [C166,169,178,179,223,224] |
| 34 | VCEAPS1CC226M | AC | | C | Capacitor (16WV 22μF) | [C57,64,90,114,115,136,170,176] |
| 35 | VCEAPS1CC476M | AC | | C | Capacitor (16WV 47μF) | [C95,167,168,180] |
| 36 | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C3,9,11,12,13,14,23~29] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C31,32,34,36,37,41,42,44,45] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C46,49,50,52,53,54,55,56] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C58,59,60,62,63,65,66,67] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C68,70,71,72,73,74,76~82] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C85,86,87,88,89,91,92,93] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C96,97,98,99,100,102~108] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C110,112,113,116~124,126] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C127,128,130,131,132,133] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C134,135,137,139,140~145] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C149,151,153~164,172,173] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C177,182,183,185,186,187] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C189~199,201,202,204] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C208~222,235~262] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (16WV 0.10μF) | [C264~279,292~303] |
| 37 | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C129] |
| 38 | VCKYCZ1HF103Z | AA | | C | Capacitor (50WV 0.01μF) | [C69,109] |
| 39 | VHDDAP202U/-1 | AB | | B | Diode (DAP202U) | [D7,10] |
| 40 | VHDRB451F//-1 | AD | | B | Diode (RB451F) | [D12,14,20,21] |
| 41 | VHDRLS73///-1 | AA | | B | Diode (RLS73) | [D8,9] |
| 42 | VHi65946P07-1 | BA | | B | IC (65946P07) | [IC32] |
| 43 | VHi74LCX08MTC | AE | | B | IC (74LCX08MTC) | [IC46,26] |
| 44 | VHi74LCX14MTC | AE | | B | IC (74LCX14MTC) | [IC43] |
| 45 | VHi74LCX244MT | AG | | B | IC (74LCX244MT) | [IC12] |
| 46 | VHi74LCX32MTC | AE | | B | IC (74LCX32MTC) | [IC11] |
| 47 | VHi74LVX16128 | AP | | B | IC (74LVX16128) | [IC15] |
| 48 | VHi90LV17AW-1 | AP | | B | IC (90LV17AW) | [IC18] |
| 49 | VHiDS14C238// | AT | | B | IC (DS14C238) | [IC42] |
| 50 | VHiEEP64-120P | AW | | B | IC (EEP64-120P) | [IC36] |
| 51 | VHiHG73C095-1 | AY | | B | IC (HG73C095) | [IC53] |
| 52 | VHiKS0U1347-1 | BN | | B | IC (KS0U1347) | [IC19] |
| 53 | VHiLCX157MT-1 | AG | | B | IC (LCX157MT) | [IC14] |
| 54 | VHiLCX16244-1 | AM | | B | IC (LCX16244) | [IC21,49,50] |
| 55 | VHiLCX16245-1 | AM | | B | IC (LCX16245) | [IC16,24,31,51,52] |
| 56 | VHiLCX16373-1 | AM | | B | IC (LCX16373) | [IC34] |
| 57 | VHiLCX74MTC-1 | AE | | B | IC (LCX74MTC) | [IC10] |
| 58 | VHiLM393D++-1 | AE | | B | IC (LM393D) | [IC39] |
| 59 | VHiLVT240MT-1 | AL | | B | IC (LVT240MT) | [IC8] |
| 60 | VHiM87J4810-1 | BK | | B | IC (M87J4810) | [IC25] |
| 61 | VHiN2370R04-1 | AF | | B | IC (N2370R04) | [IC23] |
| 62 | VHiN2370R33-1 | AF | | B | IC (N2370R33) | [IC54] |

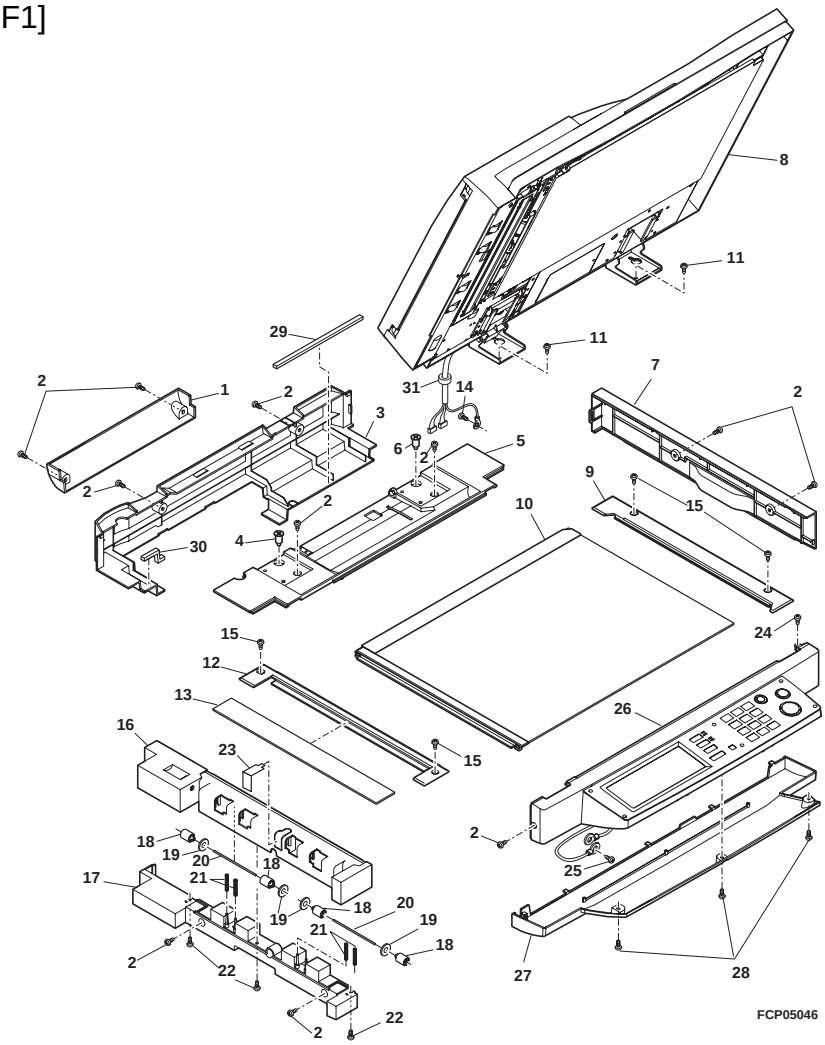
## 26 MFP Control PWB (ARM350/M450/350M/450M/ARM11)

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 63 | VHiN2391D25-1 | AG | | B | IC (N2391D25) | [IC35,33] |
| 64 | VHiNJM317DL-1 | AK | | B | IC (NJM317DL) | [IC2] |
| 65 | VHiNJU6356E-1 | AK | | B | IC (NJU6356E) | [IC40] |
| 66 | VHiPi6C2309-1 | AR | | B | IC (PI6C2309) | [IC9,29] |
| 67 | VHiPM2500++-1 | BP | | B | IC (PM2500) | [IC13] |
| 68 | VHiPST598DN-1 | AF | | B | IC (PST598DN) | [IC47] |
| 69 | VHiPST598iN-1 | AF | | B | IC (PST598I) | [IC48] |
| 70 | VHiSD4M16L1-1 | AZ | | B | IC (SD4M16L1) | [IC22] |
| 71 | VHiSD8M16L1-1 | BB | | B | IC (SD8M16L1) | [IC4,5,6,7,27] |
| 72 | VHiSR1024-7LL | AU | | B | IC (SR1024-7LL) | [IC55,56] |
| 73 | VHiT4955A20-1 | BF | | B | IC (T4955A20) | [IC20] |
| 74 | VHiTD62503F-1 | AF | | B | IC (TD62503F) | [IC38,41,44,45] |
| 75 | VHP1LHEE-002A | AC | | B | LED (Red) (1LHEE-002A) | [D13] |
| 76 | VHV1608C080-1 | AC | | B | Varistor (1608C080) | [RV1~6] |
| 77 | VHViCPS1.2/-1 | AF | | B | IC protecrot (ICPS1.2) | [Q1] |
| 78 | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R1,3,32,33,49,77,94,97,106] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R108,120,141,166,198,220,222] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R225,229,232,233,290~307] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R310~348,399,400,406] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R407,409,410,413,414] |
| 79 | VRS-CZ1JD100J | AA | | C | Resistor (1/16W 10Ω ±5%) | [R36,59,64,65,96,116,118,126] |
| | VRS-CZ1JD100J | AA | | C | Resistor (1/16W 10Ω ±5%) | [R127,136,137,149,161,170,177,185] |
| 80 | VRS-CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R9,10,101,102,109,180] |
| | VRS-CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R181,183,235,236] |
| 81 | VRS-CZ1JD102J | AA | | C | Resistor (1/16W 1.0KΩ ±5%) | [R11,129,130,134,151,204] |
| | VRS-CZ1JD102J | AA | | C | Resistor (1/16W 1.0KΩ ±5%) | [R205,243,244,253,268,279] |
| 82 | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R12,13,15,16,18,20,44,45] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R60,61,62,70,72,73,86,91] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R93,112,115,123,131,139] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R144,154,158,159,160,163] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R165,167,168,203,207,208] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R213,216,217,230,237,238] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R239,240,241,242,245,246] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R249,254,259,260,261,263] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R264,267,269,271,272,273] |
| | VRS-CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R274,282,283,284,285] |
| 83 | VRS-CZ1JD183J | AA | | C | Resistor (1/16W 18KΩ ±5%) | [R275,280] |
| 84 | VRS-CZ1JD220J | AA | | C | Resistor (1/16W 22Ω ±5%) | [R14,17,19,24,27,30,31,34] |
| | VRS-CZ1JD220J | AA | | C | Resistor (1/16W 22Ω ±5%) | [R35,37,39,40,43,46,51,54] |
| | VRS-CZ1JD220J | AA | | C | Resistor (1/16W 22Ω ±5%) | [R57,247,252] |
| 85 | VRS-CZ1JD221J | AA | | C | Resistor (1/16W 220Ω ±5%) | [R403,404] |
| 86 | VRS-CZ1JD222J | AA | | C | Resistor (1/16W 2.2KΩ ±5%) | [R199,200,209,210,211,212] |
| | VRS-CZ1JD222J | AA | | C | Resistor (1/16W 2.2KΩ ±5%) | [R218,223,248,265,266,276] |
| 87 | VRS-CZ1JD330J | AA | | C | Resistor (1/16W 33Ω ±5%) | [R25,38,41,47,48,52,56,58,66] |
| | VRS-CZ1JD330J | AA | | C | Resistor (1/16W 33Ω ±5%) | [R67,68,69,92,117,138,142] |
| | VRS-CZ1JD330J | AA | | C | Resistor (1/16W 33Ω ±5%) | [R143,147,148,152,153,173] |
| | VRS-CZ1JD330J | AA | | C | Resistor (1/16W 33Ω ±5%) | [R174,175,176,187,188,] |
| | VRS-CZ1JD330J | AA | | C | Resistor (1/16W 33Ω ±5%) | [R214,288,289] |
| 88 | VRS-CZ1JD332J | AA | | C | Resistor (1/16W 3.3KΩ ±5%) | [R215,119] |
| 89 | VRS-CZ1JD333J | AA | | C | Resistor (1/16W 33KΩ ±5%) | [R179,107] |
| 90 | VRS-CZ1JD470J | AA | | C | Resistor (1/16W 47Ω ±5%) | [R53,55,308,309] |
| 91 | VRS-CZ1JD472J | AA | | C | Resistor (1/16W 4.7KΩ ±5%) | [R63,71,74,76,87,100,111,121] |
| | VRS-CZ1JD472J | AA | | C | Resistor (1/16W 4.7KΩ ±5%) | [R122,124,128,133,146,162,164] |
| | VRS-CZ1JD472J | AA | | C | Resistor (1/16W 4.7KΩ ±5%) | [R184,206,221,224,226,227,228] |
| | VRS-CZ1JD472J | AA | | C | Resistor (1/16W 4.7KΩ ±5%) | [R231,250,251,262,270,277] |
| 92 | VRS-CZ1JD511J | AA | | C | Resistor (1/16W 510Ω ±5%) | [R278] |
| 93 | VRS-CZ1JD750J | AA | | C | Resistor (1/16W 75Ω ±5%) | [R114,145] |
| 94 | VRS-CZ1JD823J | AA | | C | Resistor (1/16W 82KΩ ±5%) | [R202] |
| 95 | VSDTC114EK/-1 | AB | | B | Transistor (DTC114EK) | [Q3] |
| 96 | VSDTC114YK/-1 | AC | | B | Transistor (DTC114YK) | [Q4] |
| 97 | VSUPA502T//-1 | AD | | B | Transistor (UPA502T) | [Q5,6,7] |

## 27 Exteriers[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | GCAB−0943FCZZ | AK | N | D | Rear lower cabinet | |
| 2 | XHBSE40P08000 | AA | | C | Screw (4×8) | |
| 3 | PCŌVP1566FCZZ | AS | N | D | Upper cabinet rear cover | |
| 4 | LX−BZ0842FCZZ | AG | | C | SPF screw | |
| 5 | GCAB−0942FCZZ | AP | N | D | Upper cabinet rear | |
| 6 | LX−BZ0776FCZZ | AG | | C | Screw R | |
| 7 | GCAB−0945FCZZ | AR | N | D | Upper cabinet right | |
| 8 | DUNT−7133DSZZ | CZ | N | E | DSPF unit | |
| | DUNT−7132DSZZ | CY | N | E | SPF unit | |
| 9 | LFiX−0544FCZZ | AG | N | D | Glass fixing right | |
| 10 | CGLSP0003RS51 | BC | N | B | Table glass | (Japan) |
| | CGLSP0003RS52 | BF | N | B | Table glass EX | (Except Japan) |
| 11 | XBTSC50P16000 | AA | | C | Screw (5×16) | |
| 12 | LFiX−0543FCZZ | AG | N | D | Glass fixing left | |
| 13 | CGLSP0102DS51 | BF | N | B | White datum glass unit | |
| 14 | XHBSD30P06000 | AA | | C | Screw (3×6) | |
| 15 | XBTSE40P06000 | AA | | C | Screw (4×6) | |
| 16 | PGiDM1900FCZZ | AR | N | C | Delivery upper PG SPF | |
| 17 | PGiDM1901FCZZ | AQ | N | C | Delivery lower PG | |
| 18 | NRŌLP0011QSZZ | AD | | C | Delivery support roller | |
| 19 | PSPŌ−0001QSZZ | AB | | C | Sponge | |
| 20 | NSFTZ2601FCZZ | AH | N | C | Delivery support roller shaft 1 | |
| 21 | MSPRC2865FCZ1 | AB | N | C | Delivery support spring | |
| 22 | XEBSE30P08000 | AA | | C | Screw (3×8) | |
| 23 | PCŌVP1624FCZZ | AC | N | D | Stanp cover | |
| 24 | LX−BZ0465FCZZ | AA | | C | Screw (4×6) | |
| 25 | XHBSD30P08000 | AA | | C | Screw (3×8) | |
| 26 | CPNLC0244DS51 | CV | N | D | MFP operation panel | (Japan) |
| | CPNLC0244DS52 | CT | N | D | MFP operation panel | (Except Japan) |
| 27 | LDAiU0627FCZZ | AZ | N | D | Operation base | |
| 28 | XEBSE40P08000 | AA | | C | Screw (4×8) | |
| 29 | PMLT−1256FCZZ | AC | N | C | Dustproof cushion 1 | |
| 30 | PMLT−1257FCZZ | AB | N | C | Dustproof cushion 2 | |
| 31 | RCŌRF0041FCZZ | AH | N | C | Core (UFR25-12-15) | |
| | | | | | | |
| | | | | | | |

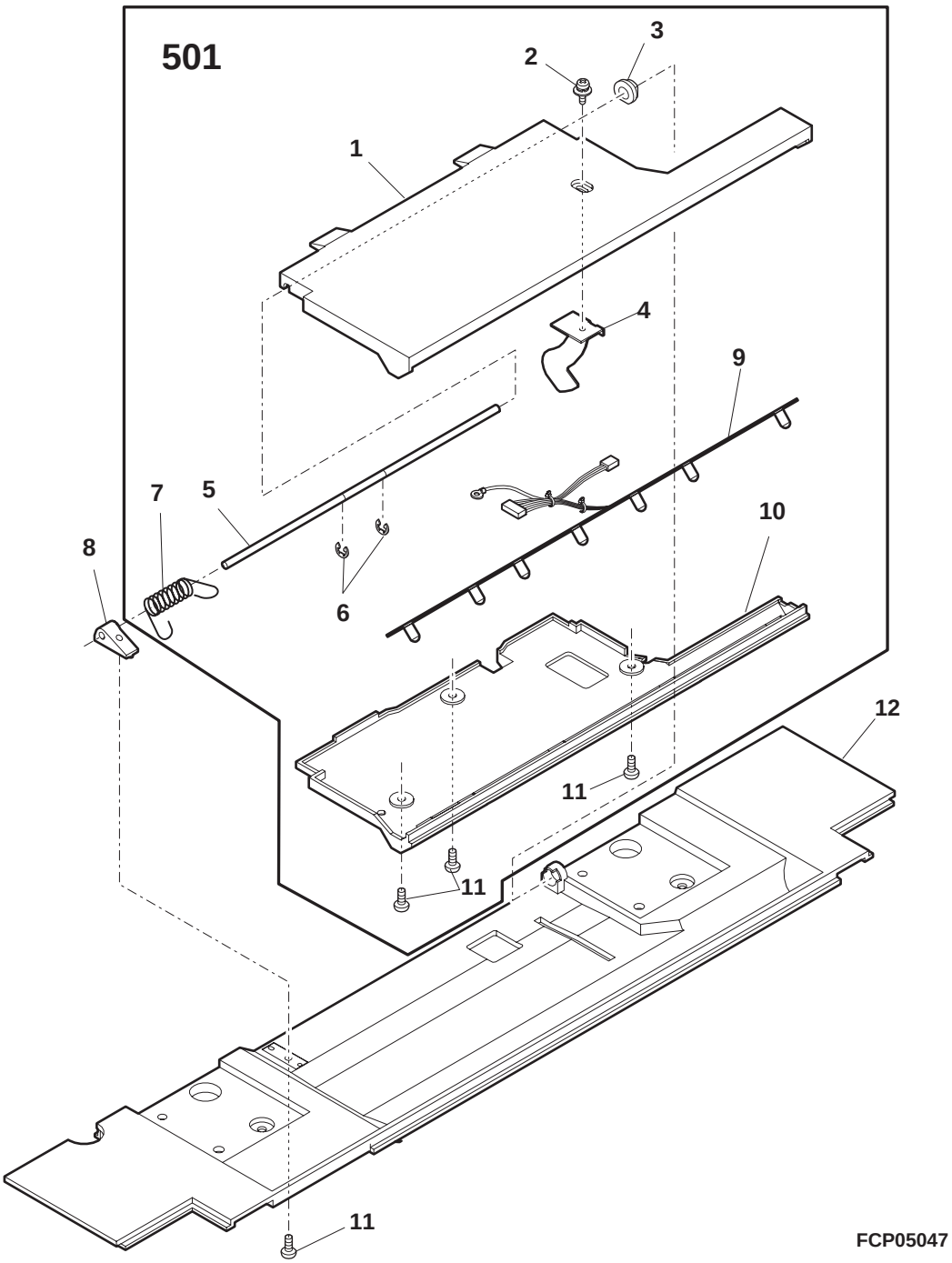
## 27 Exteriers[AR-EF1]



## 28 Original detect unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | MARMP0148FCZ2 | AK | N | C | Original detect arm lower |
| 2 | XBPSD30P06KS0 | AA | | C | Screw (3×6KS) |
| 3 | LBSHZ1102CCZZ | AC | | C | Rubber roller bushing 1 |
| 4 | PSLDH0178FCZZ | AD | | C | Original detect shield plate |
| 5 | NSFTZ1805FCZZ | AE | | C | Original detect fulcrum shaft |
| 6 | XRESP30−06000 | AA | | C | E type ring |
| 7 | MSPRT1563FCZZ | AC | | C | Original detect spring |
| 8 | LHLDZ1085FCZ2 | AD | N | C | Original detect fulcrum TIG |
| 9 | CPWBF1453FCE1 | BN | N | E | ORS emission PWB |
| 10 | MARMP0147FCZ2 | AK | N | C | Original detect arm upper |
| 11 | XEPSD30P05000 | AA | | C | Screw (3×5) |
| 12 | GCAB−0942FCZZ | AP | N | D | Upper cabinet rear |
| 501 | CARMP0147DS51 | BA | N | E | ORS emission unit |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

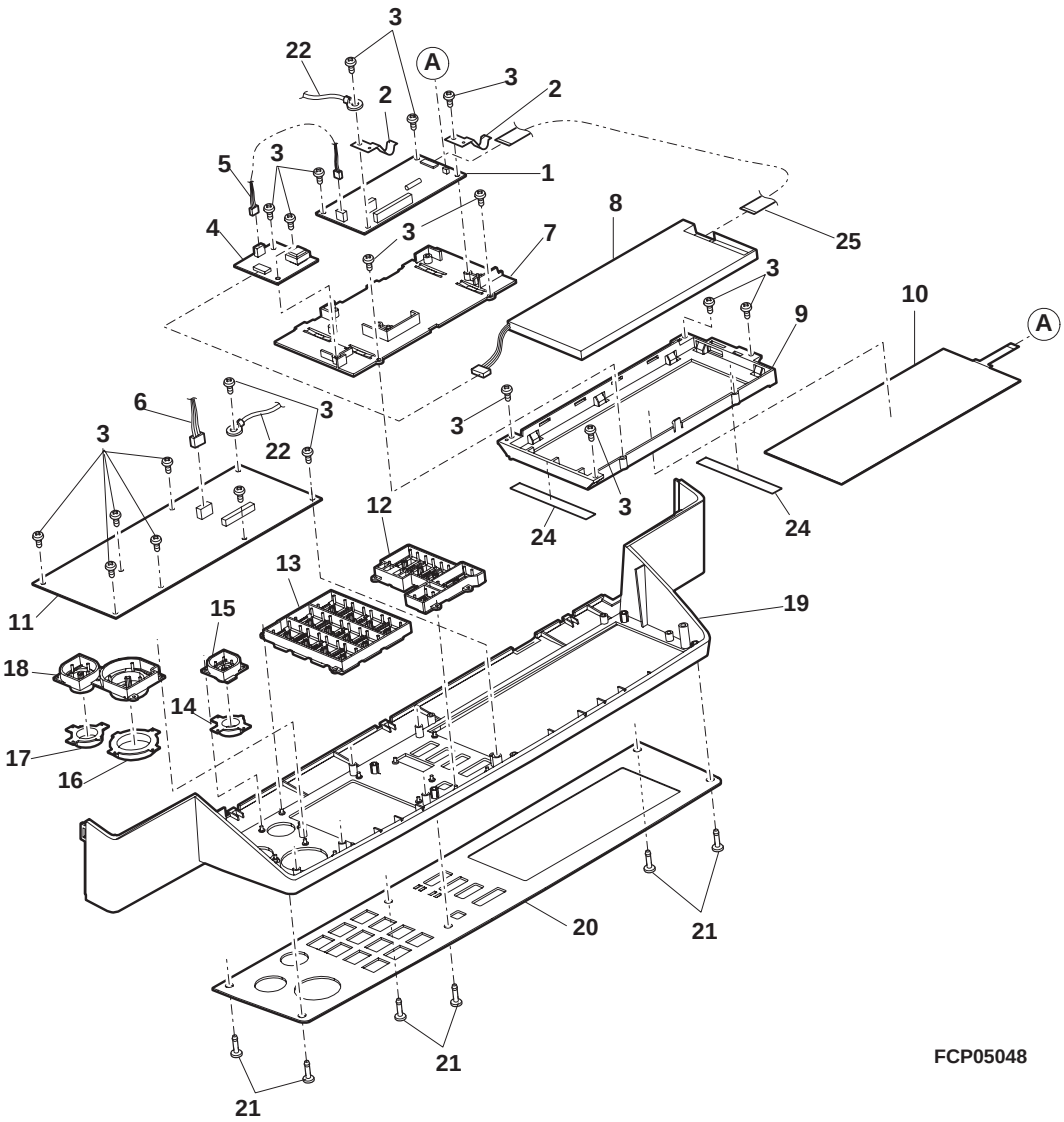
## 28 Original detect unit[AR-EF1]



## 29 Operation panel unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | CPWBN1471FCE1 | BF | N | E | LVDS PWB |
| 2 | MSPRP3009FCZZ | AD | N | C | LCD earth plate spring |
| 3 | XEPSD30P08000 | AA | | C | Screw (3×8) |
| 4 | CPWBF1470DS51 | BN | N | E | Inverter PWB |
| 5 | DHAi-3192FCZZ | AD | N | C | INV interface harness |
| 6 | DHAi-3191FCZZ | AF | N | C | ORS PD harness |
| 7 | LHLDZ1459FCZZ | AE | N | C | LCD holder B |
| 8 | VVLLM065HB1-1 | CB | N | B | LCD mojule |
| 9 | LHLDZ1458FCZZ | AF | N | C | LCD holder A |
| 10 | HPNLH0246FCZZ | BF | N | D | Touch panel |
| 11 | CPWBF1469FCE1 | BN | N | E | MFP OPE PWB |
| 12 | CBTN-0253FC01 | AN | N | E | Change key Assy |
| 13 | CBTN-0252FC01 | AP | N | E | Ten key Assy |
| 14 | CFiLW0284FC01 | AF | N | D | C key smoke Assy |
| 15 | CBTN-0251FC01 | AF | N | E | C key Assy |
| 16 | CFiLW0282FC01 | AF | N | D | Copy key smoke Assy |
| 17 | CFiLW0283FC01 | AF | N | D | CA key smoke Assy |
| 18 | CBTN-0250FC01 | AH | N | E | Copy key Assy |
| 19 | HPNLC0244FCZZ | AZ | N | D | Operation panel A |
| 20 | CPNLC0245FC01 | AY | N | D | Operation panel B (Japan) |
| | CPNLC0245FC02 | AY | N | D | Operation panel B EX-E (Except Japan) |
| 21 | LPiNS0014QSGZ | AC | N | C | Fixing pin C |
| 22 | DHAi-3193FCZZ | AC | N | C | Panel earth harness |
| 24 | PSHEZ4906FCZZ | AC | N | C | Touch panel sheet |
| 25 | QCNW-0166FCZZ | AE | N | C | LCD interface FFC |

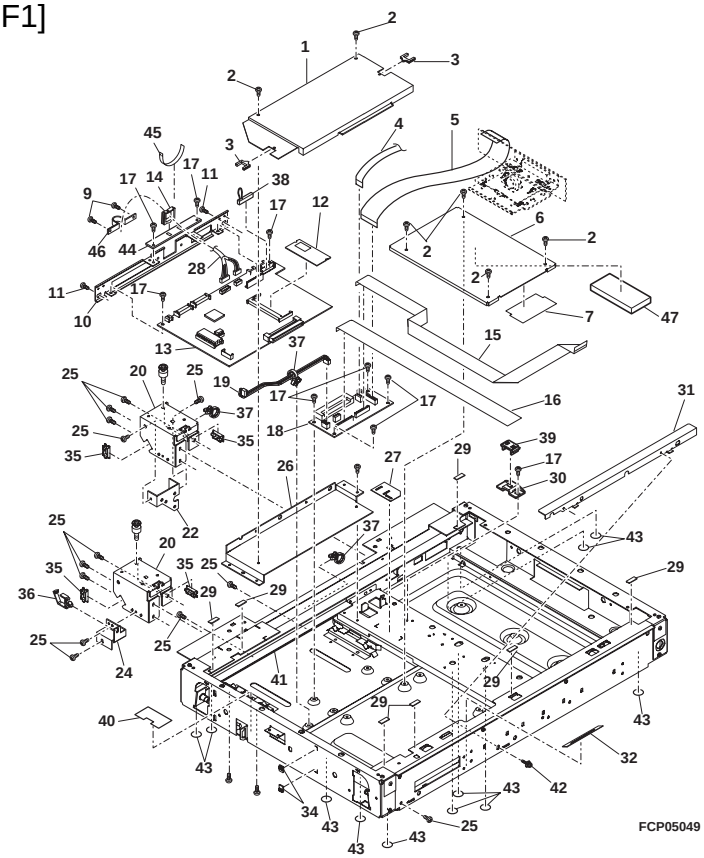
## 29 Operation panel unit[AR-EF1]



## 30 Optical unit 1[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | PCŌVP1599FCZZ | AG | N | D | Harness cover B |
| 2 | XHBSD30P04000 | AA | | C | Screw (3×4) |
| 3 | LHLDW1115FCZZ | AD | | C | Edge bushing |
| 4 | QCNW-0168FCZZ | AE | N | C | CL interface FFC |
| 5 | QCNW-0167FCZZ | AM | N | C | CCD interface FFC |
| 6 | PCŌVP1600FCZZ | AF | N | D | Harness cover C |
| 7 | PSHEP4932FCZZ | AD | N | C | Harness fixing sheet 4 |
| 9 | XBBSE30P06000 | AA | | C | Screw (3×6) |
| 10 | LPLTM5723FCZZ | AG | N | C | SCN PWB fixing plate |
| 11 | XHBSE40P08000 | AA | | C | Screw (4×8) |
| 12 | VHi28F081L02C | BB | N | B | Scanner flash unit |
| 13 | CPWBN1450FCE1 | BF | N | E | Scanner control PWB |
| 14 | LHLDW1115FCZZ | AD | | C | Edge bushing |
| 15 | QCNW-0165FCZZ | AH | N | C | MFPOP interface FFC |
| 16 | QCNW-0181FCZZ | AH | N | C | LVDS interface FFC |
| 17 | XBBSD40P06000 | AA | | C | Screw (4×6) |
| 18 | CPWBN1451DS51 | BF | N | E | Scanner interface PWB |
| 19 | DHAi-3152FCZZ | AF | N | C | Stanp interface harness |
| 20 | LPLTM5720FCZZ | AK | N | C | OC fixing plate |
| 22 | LPLTM5927FCZZ | AF | N | C | Dry heater fixing plate |
| 24 | LPLTM5877FCZZ | AE | N | C | Base rainforce plate |
| 25 | XHBSD30P06000 | AA | | C | Screw (3×6) |
| 26 | PCŌVP1598FCZZ | AL | N | D | Harness cover A |
| 27 | PSHEZ4842FCZZ | AD | N | C | Harness fixing sheet 2 |
| 28 | DHAi-3303FCZZ | BC | N | C | MFP interface cable |
| 29 | PGUMS0283FCZ1 | AA | N | C | Table glass cushion |
| 30 | LDAiU0610FCZZ | AE | | D | Harness fixing base |
| 31 | LRALM0183FCZZ | AG | N | C | MB-B rail F |
| 32 | PSHEZ4843FCZZ | AC | N | C | Harness fixing sheet 3 |
| 34 | LHLDW1007LCZZ | AD | | C | Mini clamp (MN-1) |
| 35 | LHLDW0595FCZZ | AC | | C | Edge holder (EDS2) |
| 36 | LHLDW1264FCZZ | AD | | C | Wire holder (LWS-8S-2.5W) |
| 37 | LBNDJ0043FCZZ | AA | | C | Snap band (SG-130) |
| 38 | DHAi-3153FCZZ | AC | N | C | PNC harness |
| 39 | LFiX-0537FCZZ | AD | | C | Harness fixing plate |
| 40 | PSHEZ4841FCZ1 | AD | N | C | Harness fixing sheet 1 |
| 41 | LRALM0184FCZZ | AG | N | C | MB-B rail R |
| 42 | LX-BZ0004QSZZ | AB | | C | Screw |
| 43 | PSHEZ4836FCZZ | AB | N | C | Screw protect sheet |
| 44 | LPLTP5960FCZZ | AE | N | C | SCN cable fixing plate |
| 45 | LHLDW1201CCZZ | AA | | C | SK holder |
| 46 | LFiX-0569FCZZ | AD | N | C | SCN fixing cable |
| 47 | PMLT-1282FCZZ | AE | N | C | FFC fixing cushion |
| | | | | | |

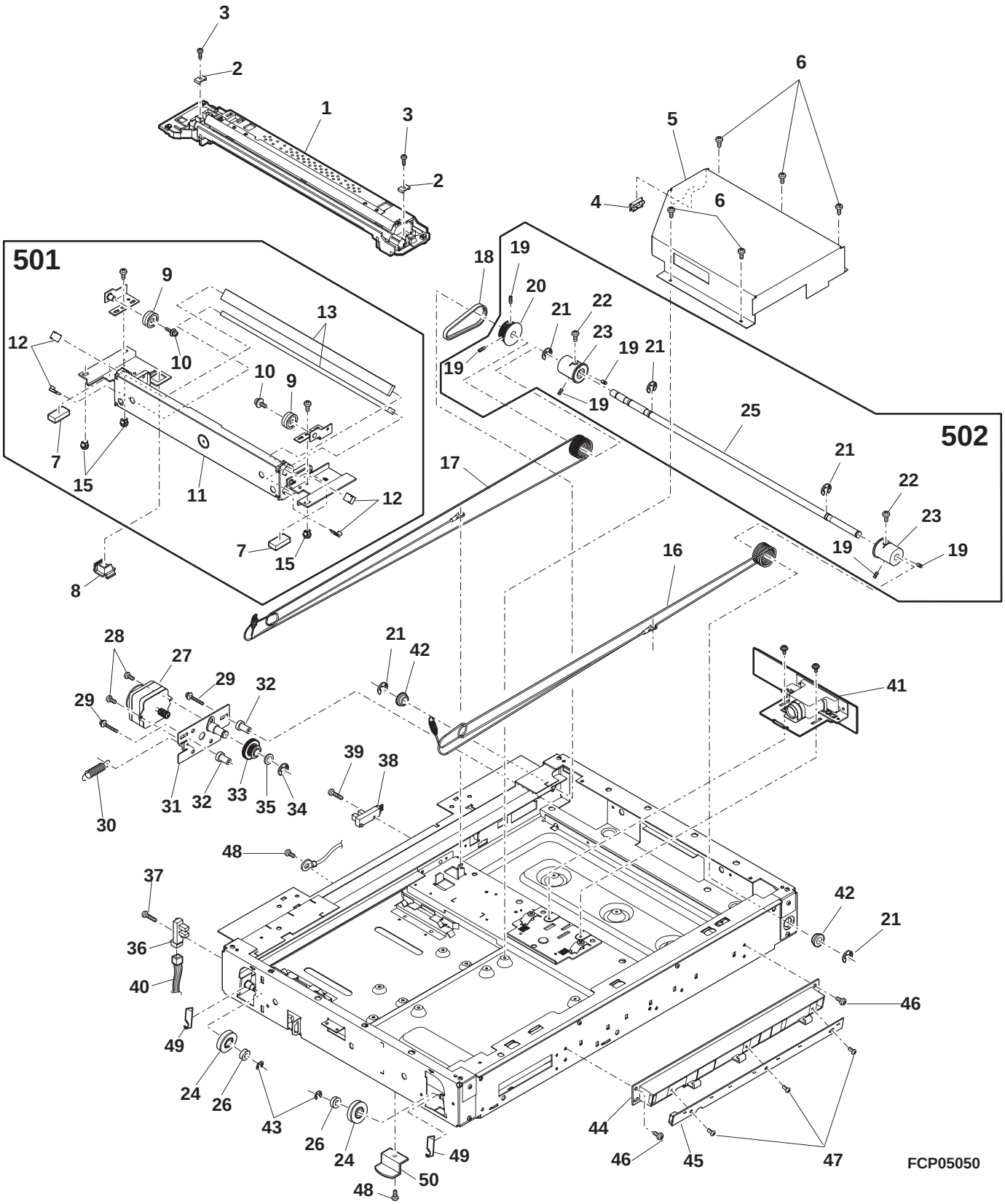
## 30 Optical unit 1[AR-EF1]



## 31 Optical unit 2[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| ⚠ 1 | CDAiU0619DS51 | BF | N | E | Lamp unit |
| 2 | LHLDZ1505FCZZ | AC | N | C | Wire holder |
| 3 | XBBSD40P06000 | AA | | C | Screw (4×6) |
| 4 | LBSHC0161FCZZ | AB | | C | Bushing |
| 5 | CCŌVP1541FC02 | AT | N | D | Dark box Assy |
| 6 | XHBSD30P04000 | AA | | C | Screw (3×4) |
| 7 | PCUSU0203FCZZ | AE | | C | Protection cushion |
| 8 | PGiDM1890FCZZ | AC | N | C | CL guide |
| 9 | NPLYZ0399FCZZ | AG | N | C | W pulley T |
| 10 | XBPSD40P06KS0 | AA | | C | Screw (4×6KS) |
| 12 | LFiX−0284FCZZ | AC | | C | 2nd,3rd mirror fixing plate F |
| 13 | PMiR−0165FCZZ | AP | N | B | 2nd,3rd mirror |
| 15 | MSLi−0138FCZZ | AC | | C | Slider |
| 16 | PWiR−0192FCZZ | AQ | N | B | MB wire F |
| 17 | PWiR−0191FCZZ | AQ | N | B | MB wire R |
| 18 | NBLTH0329FCZZ | AG | N | B | Winding drive belt |
| 19 | LX−BZ0049FCZZ | AB | | C | Screw |
| 20 | NPLYZ0338FCZZ | AN | | C | Pulley (36T) |
| 21 | XRESP70−08000 | AA | | C | E type ring |
| 22 | LX−BZ0324FCZZ | AA | | C | Screw |
| 23 | NPLYZ0013QSZZ | AL | | C | Winding pully PAN |
| 24 | NPLYZ0005QSZZ | AG | | C | Pulley |
| 25 | NSFTZ2586FCZZ | AS | N | C | Winding drive shaft |
| 26 | NPLYZ0006QSZZ | AD | | C | L pulley |
| 27 | RMŌTS0857FCZZ | AZ | N | B | Scanner motor |
| 28 | XBPSD30P05K00 | AA | | C | Screw (3×5K) |
| 29 | XBPSD40P16KS0 | AA | | C | Screw (4×16KS) |
| 30 | MSPRT2846FCZZ | AC | N | C | Belt tenshion spring |
| 31 | CPLTM5719FC01 | AG | N | C | Mirror motor fixing plate |
| 32 | PGUMS0002QSZZ | AL | | C | Protection rubber |
| 33 | NGERH0027QSZZ | AH | | C | Mirror motor idle gear |
| 34 | XRESP70−08000 | AA | | C | E type ring |
| 35 | LX−WZ0119FCZZ | AA | | C | Washer |
| 36 | VHPGP3A38／／−1 | AH | | B | Photo transistor (GP3A38) |
| 37 | XBBSD40P14000 | AA | | C | Screw (4×14) |
| 38 | VHPGP1A22LC−1 | AK | | B | Photo interupter (GP1A22LC) |
| 39 | XBBSD40P10000 | AA | | C | Screw (4×10) |
| 40 | DHAi−3150FCZZ | AD | N | C | MHPS interface harness |
| 41 | CPLTM0031RS51 | BS | N | E | CCD unit |
| 42 | NBRGC0133FCZ1 | AC | | C | PF bearing (M8) |
| 43 | XRESP40−05000 | AA | | C | E type ring |
| 44 | LHLDZ1381FCZZ | AL | | C | ORS PWB holder |
| 45 | CPWBF1454FCE1 | BN | N | E | ORS PD PWB |
| 46 | XHBSD40P06000 | AA | | C | Screw (4×6) |
| 47 | XEPSD40P06000 | AA | | C | Screw (4×6) |
| 48 | XHBSD30P06000 | AA | | C | Screw (3×6) |
| 49 | MSPRD3020FCZ1 | AG | N | C | Wire stopper spring |
| 50 | PGiDM1964FCZZ | AC | N | C | Rack adjusting guide |
| 501 | CHLDZ1446FC31 | BC | N | E | 2,3 Mirror unit |
| 502 | CSFTZ2586FC31 | AZ | N | E | Winder drive shaft unit |

31 Optical unit 2[AR-EF1]



## 32 Lamp unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| ⚠ 1 | RLMPD0658FCZZ | BA | N | B | Lamp |
| 2 | XEBSD30P08000 | AA | | C | Screw (3×8) |
| 3 | PREFL0172FCZZ | AK | | B | Reflector |
| 4 | XBBSD30P12000 | AA | | C | Screw (3×12) |
| 5 | LDAiU0619FCZZ | AT | N | C | Lamp base |
| 6 | PCUSU0203FCZZ | AE | | C | Protection cushion |
| 7 | QCNW−0168FCZZ | AE | N | C | CL interface FFC |
| 8 | MSLi−0138FCZZ | AC | | C | Slider |
| 9 | CPWBF1449FC31 | BH | N | E | Inverter PWB |
| 10 | PCUSF0334FCZZ | AP | | C | Mirror cushion |
| 11 | LSTYM0261FCZZ | AB | N | C | Wire support plate |
| 12 | LFiX−0545FCZZ | AC | N | C | CL read harness fixing |
| 13 | PMiR−0164FCZZ | AP | N | B | 1st mirror |
| 14 | MSPRP2825FCZZ | AC | N | C | Mirror spring |
| 15 | TLABZ4335FCZZ | AB | | D | HV caution label |
| | (Unit) | | | | |
| ⚠ 901 | CDAiU0619DS51 | BF | N | E | Lamp unit |
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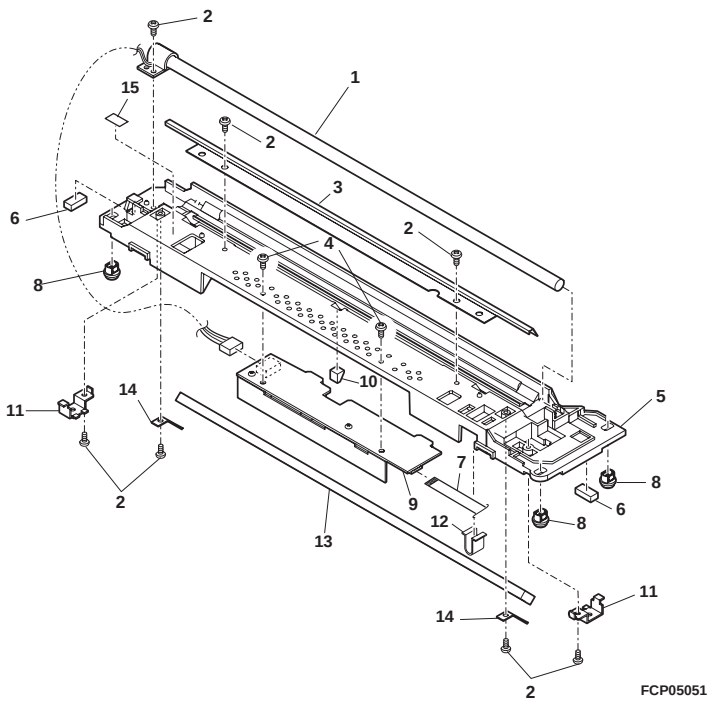
## 32 Lamp unit[AR-EF1]




## 33 DSPF Assembly section[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | PSHEZ4845FCZZ | AV | N | C | OC mat |
| 2 | PMLT−1286FCZZ | AD | N | C | OC cushion |
| 3 | PCŌVP1595FCZZ | AG | N | D | Rack cover |
| 4 | XHBSE30P06000 | AA | | C | Screw (3×6) |
| 5 | PCŌVP1615FCZZ | AE | N | D | Length detect cover N |
| 6 | XEBSE40P10000 | AA | | C | Screw (4×10) |
| 7 | MHNG−0208FCZZ | BA | N | C | SPF hinge R |
| 9 | PCŌVP1518FCZZ | AE | | D | ICU ROM cover |
| 10 | LPLTM5887FCZZ | AL | N | C | Hinge joint plate |
| 11 | XHBSE40P08000 | AA | | C | Screw (4×8) |
| 12 | LFiX−0568FCZZ | AC | N | C | Original detect fixing |
| 13 | PTPE−0265FCZZ | AC | N | C | Cover tape |
| 14 | PCŌVP1644FCZZ | AD | N | C | F cover L |
| 15 | PGUMS0298FCZZ | AC | N | C | Cover rubber L |
| 16 | CPWBF1501DS51 | BN | N | E | SPF VR PWB |
| 17 | LPLTP5743FCZZ | AF | | C | Width detect fixing plate |
| 18 | XEBSD30P08000 | AA | | C | Screw (3×8) |
| 19 | MSPRP2830FCZZ | AA | | C | Width detect spring |
| 20 | PGUMS0296FCZZ | AD | N | C | Cushion |
| 21 | NGERR1386FCZZ | AE | | C | Width detect rack |
| 22 | NGERP1385FCZZ | AF | | C | Width detect pinion |
| 23 | XEPSD30P06X00 | AA | | C | Screw (3×6X) |
| 24 | PCŌVP1645FCZZ | AH | N | C | F cover R |
| 25 | PGUMS0299FCZZ | AH | N | C | Cover rubber R |
| 26 | CPWBF1459DS51 | BN | N | E | SPF PWB |

## 33 DSPF Assembly section[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 27 | DHAi−3166FCZZ | AY | N | C | DSPF body interface harness |
| 28 | XESSE30P08000 | AA | | C | Screw (3×8) |
| 29 | DHAi−3161FCZZ | AK | N | C | SPF size detect harness |
| 30 | XEBSE30P10000 | AA | | C | Screw (3×10) |
| 33 | VHPGP1A73A+−1 | AG | | B | Photo sensor (GP1A73A) |
| 34 | MLEVP0794FCZZ | AC | N | C | Length detect actuator |
| 35 | XEBSD40P16000 | AA | | C | Screw (4×16) |
| 37 | LPLTP5778FCZZ | AG | N | D | Adjust plate R |
| 38 | LPLTP5777FCZZ | AG | N | D | Adjust plate F |
| 39 | PCÖVP1549FCZZ | AU | N | D | Upper cover |
| 40 | XEBSE30P08000 | AA | | C | Screw (3×8) |
| 41 | MARMP0243FCZZ | AD | | C | Manual feeding tray arm |
| 42 | PRNGP0090FCZZ | AA | | C | Ring (E5) |
| 43 | LPLTM2573FCZ1 | AD | | C | ADF MG plate |
| 44 | LPLTP5938FCZZ | AC | N | C | Shading plate N |
| 45 | TLABH4440FCZZ | AF | | D | Original read label (Japan) |
| | | | | | |
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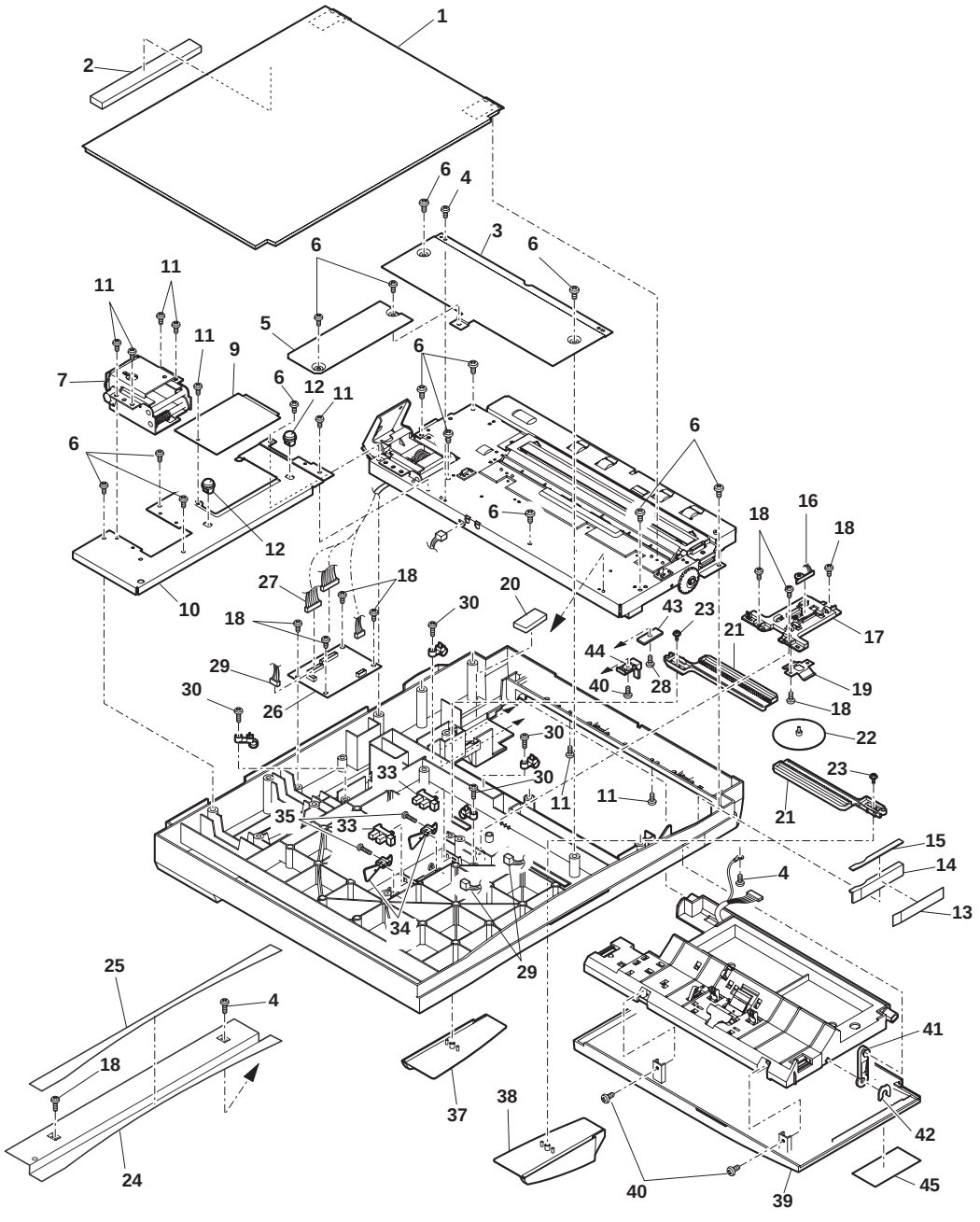
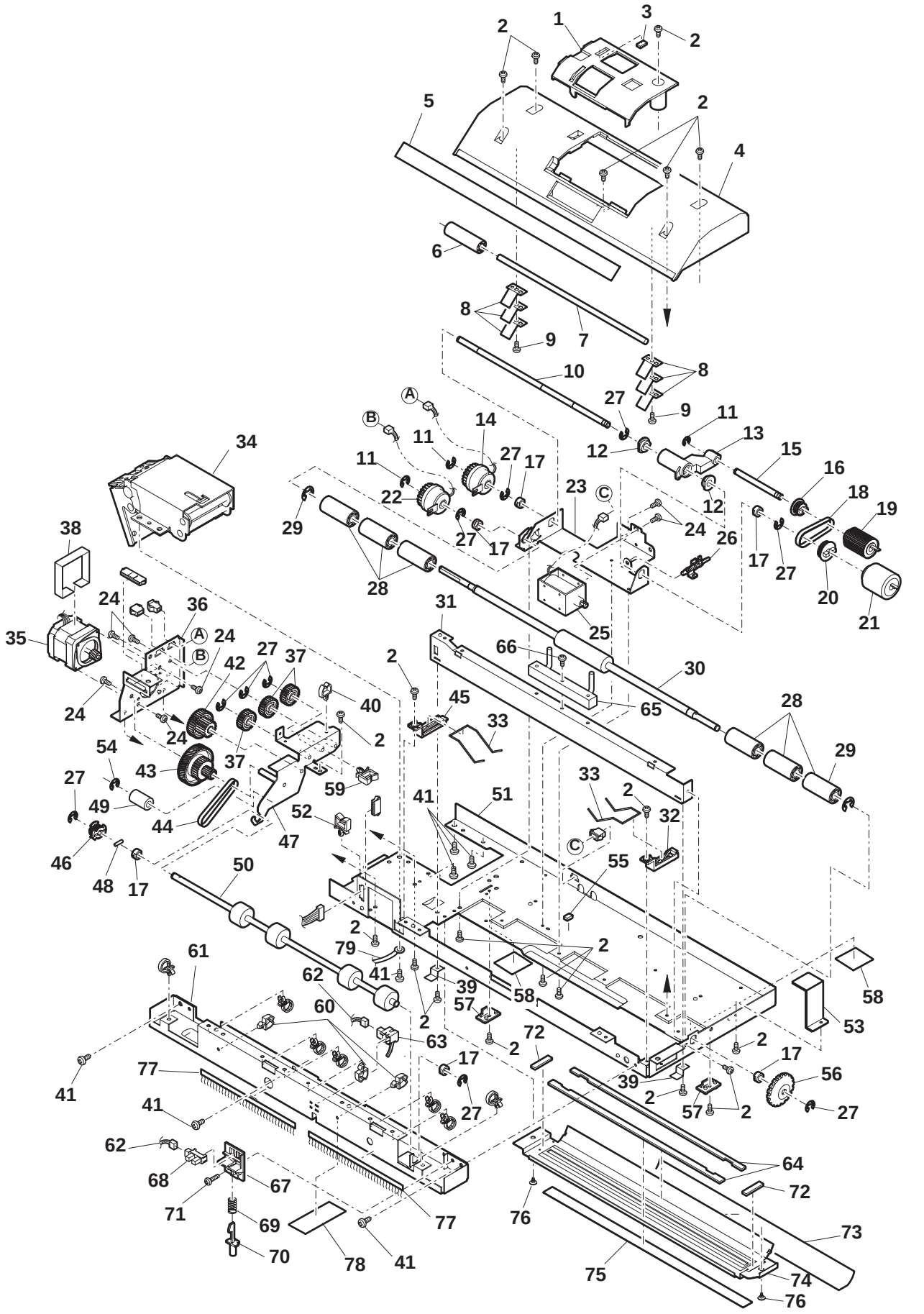
## 33 DSPF Assembly section[AR-EF1]



## 34 DSPF Paper feed unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | PCŌVP1594FCZZ | AG | N | D | Roller cover |
| 2 | XHBSE30P06000 | AA | | C | Screw (3×6) |
| 3 | PMLT-1272FCZZ | AB | N | C | Damper cushion 3 |
| 4 | PGiDM1953FCZZ | AS | N | C | Paper feed PG SPF |
| 5 | PSHEP4915FCZZ | AE | N | C | PS rear mylar |
| 6 | PCLR-0471FCZZ | AG | N | C | PS support roller |
| 7 | NSFTZ2600FCZZ | AM | N | C | PS support shaft |
| 8 | MSPRP2878FCZZ | AC | N | C | PS support plate spring |
| 9 | XEBSD30P08000 | AA | | C | Screw (3×8) |
| 10 | NSFTZ2599FCZ1 | AW | N | C | Separate roller shaft SPF |
| 11 | XRESP40-06000 | AA | | C | E type ring |
| 12 | NBRGC0136FCZZ | AC | | C | Bearing (M6) |
| 13 | LHLDZ1483FCZZ | AF | | C | Paper feed rotation plate |
| 14 | PCLC-0303FCZZ | AT | N | B | Separate clutch |
| 15 | NSFTZ2678FCZZ | AL | N | C | Pick up shaft |
| 16 | NPLYZ0398FCZZ | AC | | C | Pick up roller pulley (22P) |
| 17 | NBRGM0096FCZ1 | AB | | C | Bearing |
| 18 | NBLTH0363FCZZ | AG | N | B | Belt (S2M120) |
| 19 | NRŌLR1312FCZZ | AN | | C | Pick up roller |
| 20 | NPLYZ0397FCZZ | AK | | C | Paper feed roller pulley (28P) |
| 21 | NRŌLR1317FCZZ | AP | | C | Separate roller |
| 22 | PCLC-0302FCZZ | AT | N | B | PS clutch SPF |
| 23 | LPLTM5928FCZZ | AG | N | C | Paper feed base plate SPF |
| 24 | XBBSD30P06000 | AA | | C | Screw (3×6) |
| 25 | RPLU-0336FCZZ | AS | N | B | Pick up solenoid |
| 26 | MARMP0284FCZZ | AC | N | C | Pick up joint arm N |
| 27 | XRESP50-06000 | AA | | C | E type ring |
| 28 | NRŌLP1364FCZZ | AC | | C | Delivery roller M |
| 29 | XRESP70-08000 | AA | | C | E type ring |
| 30 | NRŌLR1318FCZZ | AR | N | C | PS roller SPF |
| 31 | LSTYM0288FCZZ | AK | N | C | CIS stay |
| 32 | LHLDZ1485FCZZ | AC | N | C | SP holder F |
| 33 | MSPRD3002FCZZ | AC | N | C | Spring N |
| 34 | MHNG-0209FCZZ | BC | N | C | DSPF hinge L |
| 35 | RMŌTS0876FCZZ | BD | N | B | SPF motor N |
| 36 | LFRM-1022FCZZ | AK | N | D | Drive frame |
| 37 | NGERH1477FCZZ | AC | N | C | Gear (24T) |
| 38 | PSHEZ4949FCZZ | AE | N | C | Motor sheet |
| 39 | MSPRP3011FCZZ | AC | N | C | Earth plate spring |
| 40 | LHLDW1009ACZZ | AA | | C | Clamp |
| 41 | XHBSE40P08000 | AA | | C | Screw (4×8) |
| 42 | NGERH1476FCZZ | AD | N | C | Gear (35T/18T) |
| 43 | NGERH1478FCZZ | AE | N | C | Gear (55T/28T/18P) |
| 44 | NBLTH0364FCZZ | AG | N | B | Belt (S2M130) |
| 45 | LHLDZ1486FCZZ | AC | N | C | SP holder R |
| 46 | NPLYZ0375FCZZ | AC | | C | Pulley (22T) |
| 47 | CPLTM5882FC02 | AN | N | C | Drive plate |
| 48 | LPiNS1031HCZZ | AA | | C | Spring pin |
| 49 | PCLR-0426FCZZ | AD | | C | Slide roller |
| 50 | NRŌLR1320FCZZ | AQ | N | C | Delivery roller SPF |
| 51 | LPLTM5884FCZZ | AW | N | C | Base tray reinforce plate N |
| 52 | LHLDW0429FCZZ | AB | | C | Wire holder (WS-2NS) |
| 53 | LPLTM5785FCZZ | AC | N | C | MG plate |
| 54 | XRESP20-04000 | AA | | C | E type ring |
| 55 | PMLT-1270FCZZ | AB | N | C | Damper cushion 1 |
| 56 | JKNBZ0141FCZZ | AH | N | C | Jam release knob |
| 57 | LPLTM5889FCZZ | AC | N | C | Datum plate |
| 58 | PSHEP4846FCZZ | AD | N | C | OC mat mylar R |
| 59 | LHLDW2101SCZZ | AB | | C | Cable clamp |
| 60 | LHLDW1009ACZZ | AA | | C | Clamp |
| 61 | LPLTM5929FCZZ | AR | N | C | Delivery roller fixing plate |
| 62 | DHAi-3281FCZZ | AH | N | C | SPF delivery sensor harness |
| 63 | QSW-Z0531FCZZ | AL | | B | Delivery jam sensor |
| 64 | PCUSS0372FCZZ | AD | N | C | CIS cushion 1 |
| 65 | LSTPP0359FCZZ | AE | N | C | PS fornt stopper |
| 66 | XHBSD30P14000 | AA | | C | Screw (3×14) |
| 67 | LHLDZ1484FCZZ | AC | N | C | Open/close holder |
| 68 | VHPGP1A73A+-1 | AG | | B | Photo sensor (GP1A73A) |
| 69 | MSPRC3001FCZZ | AB | N | C | Open/close detect spring N |
| 70 | MLEVP0837FCZZ | AC | N | C | Open/close actuator N |
| 71 | XHBSE30P10000 | AA | | C | Screw (3×10) |
| 72 | PCUSS0373FCZZ | AB | N | C | CIS cushion 2 |
| 73 | PSHEP4916FCZ1 | AF | N | C | White mylar |
| 74 | PGiDH1897FCZZ | AT | N | C | CIS paper guide |
| 75 | PGLSP0103FCZZ | AV | N | C | CIS glass |
| 76 | LX-BZ0931FCZZ | AC | N | C | Screw (M3) |
| 77 | PBRSS0209FCZZ | AG | N | B | Discharger blass SPF |
| 78 | PSHEZ4957FCZZ | AC | N | C | Delivery sheet |
| 79 | DHAi-3336FCZZ | AB | N | C | ESD harness DSPF |
| | | | | | |

## 34 DSPF Paper feed unit[AR-EF1]



## 35 DSPF Upper transfer unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | LPLTM5891FCZZ | AE | N | C | Upper delivery rainforce plate |
| 2 | PMLT-1272FCZZ | AB | N | C | Damper cushion 3 |
| 3 | LSTPP0353FCZZ | AE | N | C | Original stopper |
| 5 | LPLTM5930FCZZ | AD | N | C | Separate pad rainforce plate |
| 6 | XEBSD30P08000 | AA | | C | Screw (3×8) |
| 7 | CPLTM5746FC01 | AE | N | C | Separate pad fixing plate AS |
| 8 | LPLTP5747FCZZ | AC | N | C | Separate plate |
| 9 | MSPRT2864FCZZ | AC | N | C | Pressure spring |
| 10 | VHPGP1A73A+-1 | AG | | B | Photo sensor (GP1A73A) |
| 11 | PMAGT0072FCZZ | AF | | C | Magnet catch |
| 12 | RPLU-0347FCZZ | AQ | N | B | Gate solenoid |
| 13 | DHAi-3162FCZZ | AK | N | C | SPF paper feed harness |
| 14 | MLEVP0796FCZZ | AC | N | C | Set detect actuator |
| 15 | MARMP0248FCZZ | AE | | C | MF gate joint arm |
| 16 | MLEVP0804FCZZ | AC | N | C | Stopper lever |
| 17 | MSPRP2832FCZZ | AC | N | C | Separate assistance plate spring |
| 18 | PSHEZ4878FCZZ | AC | N | C | Separate mylar upper |
| 19 | PSHEZ4847FCZZ | AL | N | C | Separate sheet |
| 20 | PSHEP4848FCZZ | AB | N | C | Separate mylar lower |
| 21 | LSTPP0314FCZZ | AA | | C | E3 stopper |
| 22 | MSPRD2870FCZ1 | AC | N | C | Stopper spring |
| 23 | NSFTZ2659FCZZ | AR | N | C | Fulcrum shaft |
| 24 | LPLTM5932FCZZ | AC | | C | Tray 2 sensor fixing plate |
| 25 | XEBSE40P10000 | AA | | C | Screw (4×10) |
| 26 | MLEVP0797FCZZ | AC | N | C | PS front actuator |
| 27 | MSPRD2879FCZZ | AB | N | C | PS front actuator spring |
| 28 | PMLT-1271FCZZ | AB | N | C | Damper cushion 2 |
| 29 | PSHEP4937FCZZ | AB | N | C | Fixing mylar |
| 30 | PGiDM1899FCZZ | AY | N | C | Upper delivery PG |
| 31 | MSPRT2863FCZZ | AB | N | C | Paper feed plate spring |
| 32 | LPLTP5748FCZZ | AD | N | C | Paper feed plate |
| 34 | XHBSE30P06000 | AA | | C | Screw (3×6) |
| 35 | XBBS230P10000 | AA | | C | Screw (3×10) |
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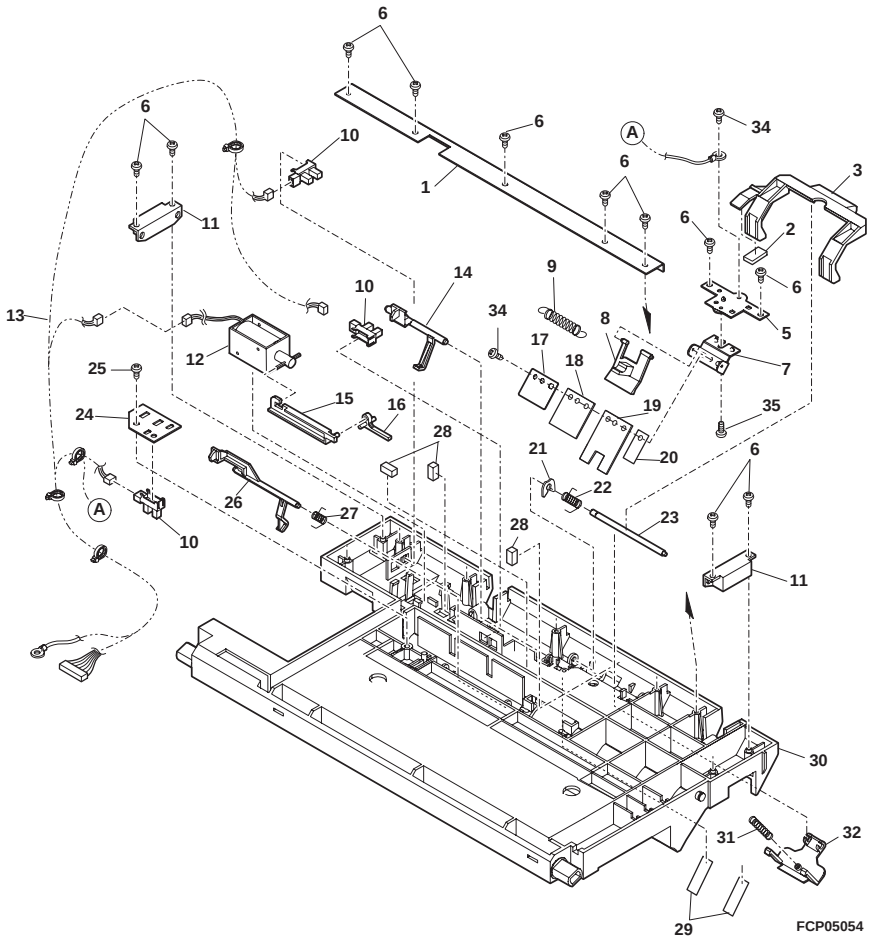
## 35 DSPF Upper transfor unit[AR-EF1]



## 36 DSPF CIS unit[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | CPWBN1458FCE1 | BF | N | E | CIS control PWB |
| 2 | XBBSD30P06000 | AA | | C | Screw (3×6) |
| 3 | PCOVP1593FCZZ | AF | N | D | CIS PWB cover N |
| 4 | DUNT-7079FCZZ | CC | N | E | CIS unit |
| 5 | LX-BZ0680FCZZ | AB | | C | Screw |
| 6 | QCNW-0170FCZZ | AH | N | C | CIS interface FFC |
| 7 | XBBSD40P08000 | AA | | C | Screw (4×8) |
| 8 | PMLT-1284FCZZ | AE | N | C | Interface FFC fixing cushion |
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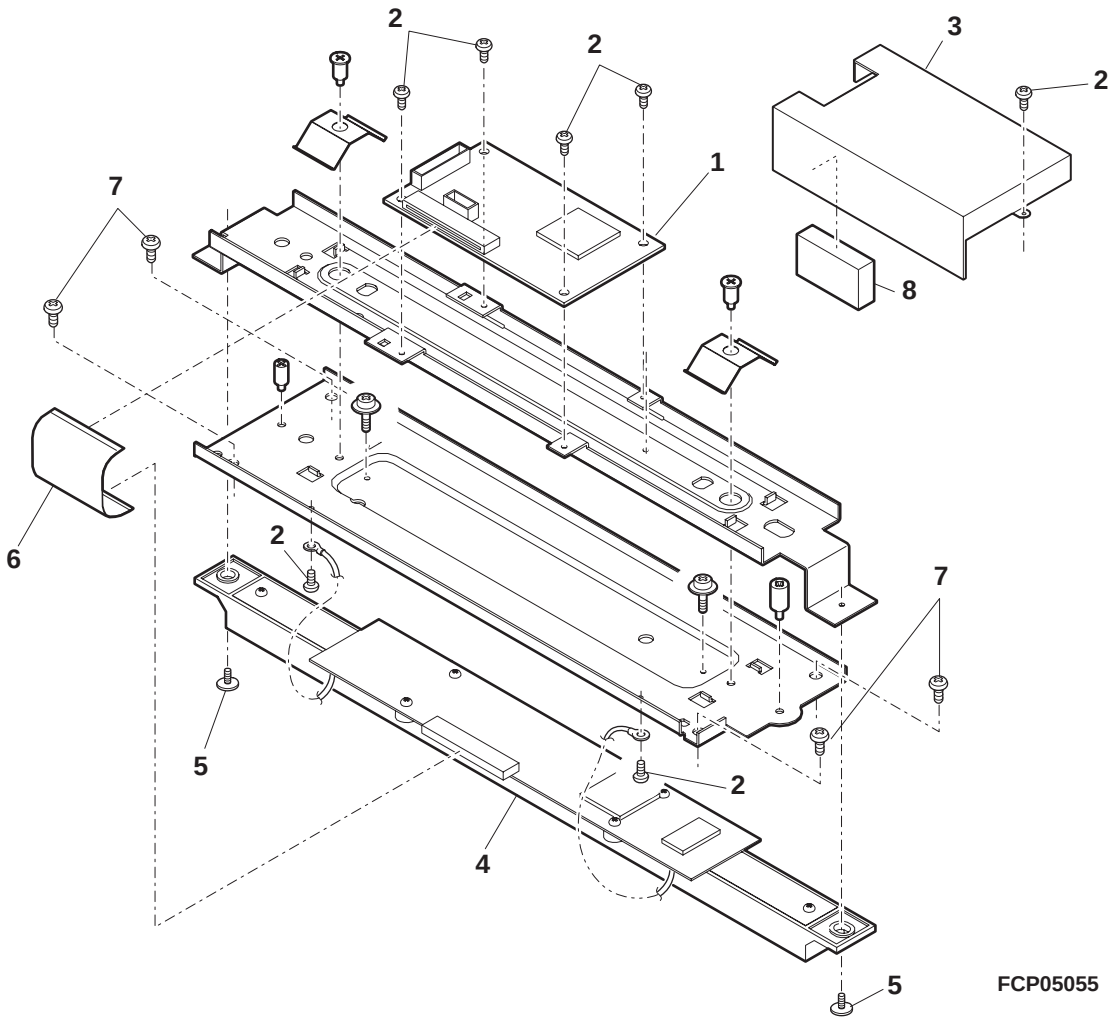
## 36 DSPF CIS unit[AR-EF1]



## 37 Packing Material & Accessories[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | SPAKA6075DSZZ | AA | N | D | RSPF protect sheet 1 |
| 2 | LSŌU−0177FCGZ | AP | | D | Delivery tray T |
| | LSŌU−0179FCZZ | AR | | D | Delivery tray 1 |
| 3 | SPAKA0307QSZZ | AD | | D | Protect sheet FN5 |
| 4 | TCADZ1178FCZZ | AB | | D | Screw caution card |
| 5 | LX−BZ0787FCZZ | AH | | C | Screw for 2/3 mirror lock |
| 6 | SPAKA6132FCZZ | AT | N | D | Packing add upper EF1 |
| 7 | SSAKZ0003QSZZ | AF | | D | Body vinyl bag |
| 8 | SPAKA6133FCZZ | AU | N | D | Packing add botom EF1 |
| 9 | SPAKC6131DSZZ | AF | N | D | Packing case (Japan) |
| | SPAKC6131DS11 | AF | N | D | Packing case (Except Japan) |
| 10 | SPAKA6265FCZZ | AC | N | D | Fusing protect add |
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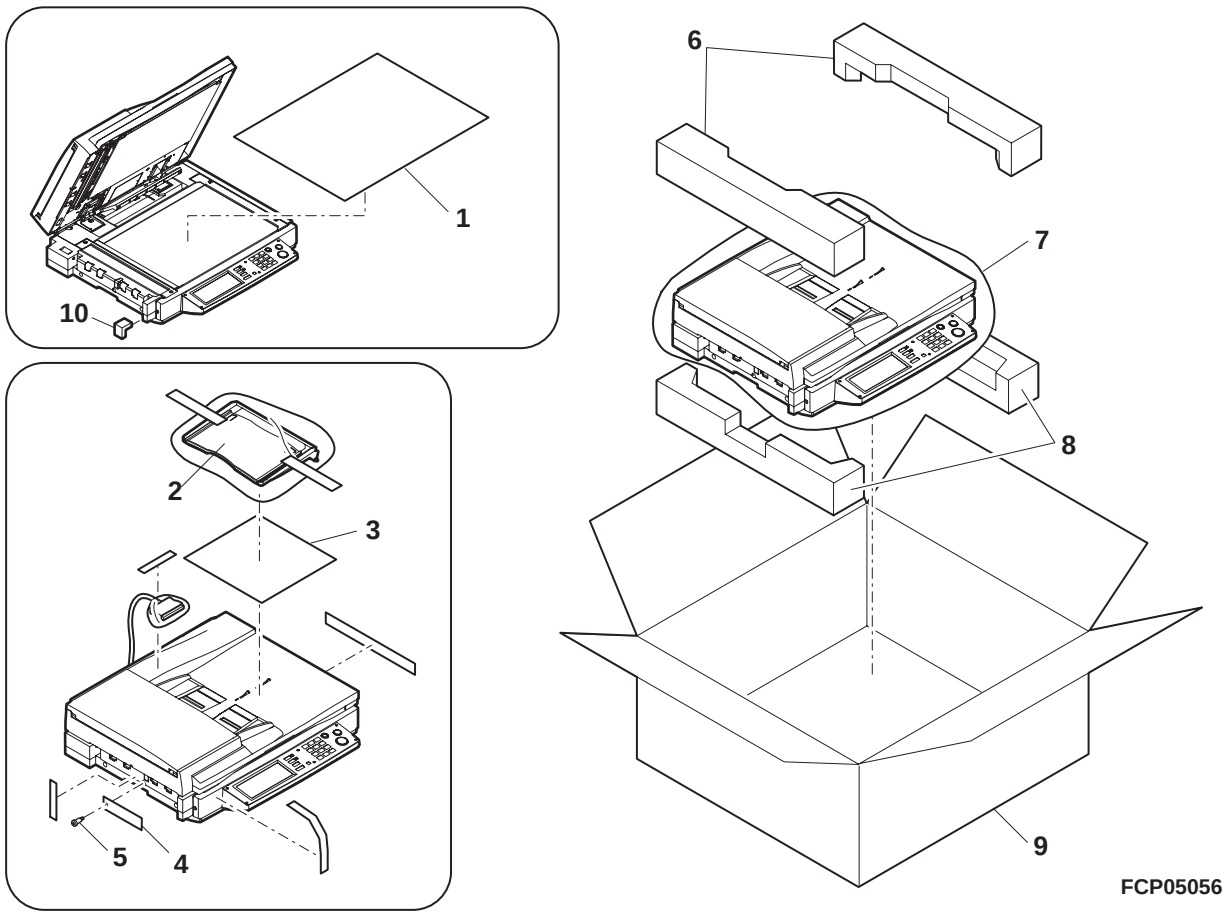
## 37 Packing Material & Accessories[AR-EF1]



## 38 MFP OPE PWB[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | QCNCM1171FCZZ | AE | N | C | Connector (6pin) | [CN2] |
| 2 | QCNCW1134FCZZ | AH | | C | Connector (24pin) | [CN1] |
| 3 | QSW-P0005QSZZ | AC | | B | Tact switch (B3F-6102) | [PRK,FAK,COK,JOK,CUK,1K,2K] |
| | QSW-P0005QSZZ | AC | | B | Tact switch (B3F-6102) | [3K,4K,5K,6K,7K,8K,9K] |
| | QSW-P0005QSZZ | AC | | B | Tact switch (B3F-6102) | [*K,K,#K,CLK,CAK,PSW] |
| 4 | RALMB1002LCZZ | AE | | B | Alarm (PKM13EPY-4000-TF01) | [BZ1] |
| 5 | RC-KZ0008QCZZ | AB | N | C | Capacitor (UP050F ZABZ) | [C6] |
| 6 | RCRS-0007FCZZ | AD | | B | Crystal (CSB480EB) | [X1] |
| 7 | RH-DZ0016FCZZ | AB | | B | Diode (MA700) | [D1] |
| 8 | VCEAJU1CW476M | AB | | C | Capacitor (16WV 47µF) | [C1] |
| 9 | VCKYPU1EB223Z | AB | | C | Capacitor (25WV 0.022µF) | [C2,3] |
| 10 | VCKYPU1HB101K | AA | | C | Capacitor (50WV 100PF) | [C4,5] |
| 11 | VHD1SS133/-1 | AA | | B | Diode (1SS133) | [D2,3] |
| 12 | VHiS1340AF+-1 | AH | | B | IC (S1340AF) | [IC1] |
| 13 | VHP1LHLE-002A | AC | | B | LED(Green) (LTL-1LHLE-002A) | [PRT,FAX,COPY,JOB,PONL] |
| | VHP1LHLE-002A | AC | | B | LED(Green) (LTL-1LHLE-002A) | [PDATA,FCM,FDATA] |
| 14 | VHPLT9400E/-1 | AK | | B | LED (LT9400E) | [RPL] |
| 15 | VRD-HT2EY101J | AA | | C | Resistor (1/4W 100Ω ±5%) | [R1] |
| 16 | VRD-HT2EY102J | AA | | C | Resistor (1/4W 1.0KΩ ±5%) | [R8] |
| 17 | VRD-HT2EY302J | AA | | C | Resistor (1/4W 3.0KΩ ±5%) | [R2] |
| 18 | VRD-HT2EY331J | AA | | C | Resistor (1/4W 330Ω ±5%) | [R3] |
| 19 | VRD-HT2EY471J | AA | | C | Resistor (1/4W 470Ω ±5%) | [R4,5,6,7] |
| 20 | VS2SC1740SR-1 | AB | | B | Transistor (2SC1740SR) | [Q2] |
| 21 | VSDTC114YS/-1 | AB | | B | Transistor (DTC114YS) | [Q1] |
| | (Unit) | | | | | |
| 901 | CPWBF1469FCE1 | BN | N | E | MFP OPE PWB | |
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## 39 Scanner control PWB[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | QCNCM0828FCZZ | AE | | C | Connector (26pin) | [CN13] |
| 2 | QCNCM0829FCZZ | AG | | C | Connector (28pin) | [CN12] |
| 3 | QCNCM1166FCZZ | AK | N | C | Connector (20pin) | [CN18] |
| 4 | QCNCM1167FCZZ | AP | N | C | Connector (50pin) | [CN19] |
| 5 | QCNCM7014SC1C | AC | | C | Connector (13pin) | [CN5] |
| 6 | QCNCM7022SC0C | AB | | C | Connector (3pin) | [CN10] |
| 7 | QCNCM7022SC0E | AB | | C | Connector (5pin) | [CN6] |
| 8 | QCNCM7022SC0F | AB | | C | Connector (6pin) | [CN7] |
| 9 | QCNCW0885FCZZ | AG | | C | Connector (12pin) | [CN14] |
| 10 | QCNCW7040XC8J | AP | | C | Connector (80pin) | [CN16] |
| 11 | QSŌCZ0002QSZZ | AD | | C | IC socket (8pin) | [IC13] |
| 12 | QSŌCZ0071FCZZ | AP | | C | Socket (72pin) | [SOCKET1] |
| 13 | QSŌCZ6428ACZZ | AE | | C | IC socket (28pin) | [IC14] |
| 14 | RCRMZ6007RCZZ | AD | | B | Resonator (4.19MHz) | [X1] |
| 15 | RCRSZ0001QSZZ | AG | | B | Crystal (19.6608MHz) | [X2] |
| 16 | RFiLN0049FCZZ | AE | N | C | Filter | [NF5,NF6,NF7,NF8,NF9,NF10] |
| 17 | RFiLN6012RCZZ | AB | | C | EMI filter | [NF1,NF4] |
| 18 | RFiLZ1005LCZZ | AB | | C | EMI filter | [NF3] |
| 19 | RH-iX2196SCZZ | AG | | B | Regulator | [IC5] |
| 20 | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR9,BR3,BR4,BR7,BR8,BR10] |
| | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR12,BR11,BR6,BR13,BR14,BR15] |
| | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR16,BR17,BR18,BR20,BR21,BR22] |
| | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR23,BR24,BR25,BR26,BR27,BR28] |
| | RMPTR4103ACZZ | AB | | B | Block resistor (10KΩ×4) | [BR29,BR30,BR5,BR19,BR1] |
| 21 | VCCCCZ1HH220J | AA | | C | Capacitor (50WV 22pF) | [C58,C60] |
| 22 | VCEAGA1AW476M | AA | | C | Capacitor (10WV 47µF) | [C46,C36] |
| 23 | VCEAGA1AW477M | AB | | C | Capacitor (10WV 470µF) | [C20,C24] |
| 24 | VCEAGA1CW477M | AB | | C | Capacitor (16WV 470µF) | [C10] |
| 25 | VCEAGA1HW224M | AA | | C | Capacitor (50WV 0.22µF) | [C73,C74] |
| 26 | VCEAGA1VW476M | AB | | C | Capacitor (35WV 47uF) | [C63] |
| 27 | VCEAZU1VW477M | AD | | C | Capacitor (35WV 470µF) | [C16] |
| 28 | VCKYCZ1CB103K | AA | | C | Capacitor (16WV 0.010µF) | [C76,C77,C78,C80] |
| 29 | VCKYCZ1EF223Z | AA | | C | Capacitor (25WV 0.022µF) | [C1,C11,C13,C14,C22,C23] |
| | VCKYCZ1EF223Z | AA | | C | Capacitor (25WV 0.022µF) | [C26,C19,C12,C37,C40,C41] |
| | VCKYCZ1EF223Z | AA | | C | Capacitor (25WV 0.022µF) | [C42,C47,C48,C49,C51,C57] |
| | VCKYCZ1EF223Z | AA | | C | Capacitor (25WV 0.022µF) | [C59,C61,C65,C66,C67,C68] |
| | VCKYCZ1EF223Z | AA | | C | Capacitor (25WV 0.022µF) | [C69,C71,C72,C21,C35,C50,C82] |
| 30 | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C2,C3,C4,C5,C6,C7] |
| | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C8,C9,C25,C27,C28,C29] |
| | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C30,C31,C32,C33,C34,C39] |
| | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C43,C44,C53,C64,C75,C79,C84] |
| 31 | VCKYCZ1HB222K | AA | | C | Capacitor (50WV 2200pF) | [C45,C54,C55,C62] |
| 32 | VCKYCZ1HF103Z | AA | | C | Capacitor (50WV 0.01µF) | [C15,C18,C70,C81,C83] |
| 33 | VCQYNA1HM103K | AA | | C | Capacitor (50WV 0.01µF) | [C56] |
| 34 | VHDDAN202K/-1 | AB | | B | Diode (DAN202K) | [D1,D3,D4,D18,D19,D20] |
| | VHDDAN202K/-1 | AB | | B | Diode (DAN202K) | [D22,D23,D15,D14] |

## 39 Scanner control PWB[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 35 | VHDDAP202K／－1 | AB | | B | Diode (DAP202K) | [D5,D16,D17,D24,D25,D26] |
| | VHDDAP202K／－1 | AB | | B | Diode (DAP202K) | [D13,D12] |
| 36 | VHDDSM1D1／／－1 | AB | | B | Diode (DSM1D1) | [D21,D6] |
| 37 | VHDM1FL20U＋－1 | AC | N | B | Diode (M1FL20U) | [D8,D9,D10,D11] |
| 38 | VHDMA704A／／－1 | AC | | B | Diode (MA704A) | [D2] |
| 39 | VHEHZS3B3／／－1 | AB | | B | Zener diode (HZS3B3) | [D7] |
| 40 | VHi74VHC04M－1 | AE | N | B | IC (74VHC04M) | [IC8,IC18] |
| 41 | VHi74VHC32M－1 | AD | N | B | IC (74VHC32M) | [IC6] |
| 42 | VHi90LV17AW－1 | AP | | B | IC (90LV17AW) | [IC21] |
| 43 | VHiD65943GJ－1 | AY | N | B | IC (D65943GJ) | [IC7] |
| 44 | VHiEES04L400P | AG | | B | IC (EES04L400P) | [IC13] |
| 45 | VHiH8S2322R－1 | AZ | | B | IC (H8S2322R) | [IC11] |
| 46 | VHiHN58V65A－1 | AW | | B | IC (HN58V65A) | [IC14] |
| 47 | VHiLM324D＋＋－1 | AE | | B | IC (LM324D) | [IC1] |
| 48 | VHiLM339D＋＋－1 | AE | | B | IC (LM339D) | [IC10] |
| 49 | VHiLV25612J－1 | AQ | | B | IC (LV25612J) | [IC19] |
| 50 | VHiMTD1361F－1 | AR | | B | IC (MTD1361F) | [IC9] |
| 51 | VHiTD62003AP1 | AG | | B | IC (TD62003AP1) | [IC4,IC15,IC20] |
| 52 | VHiTD62503F／－ | AG | | B | IC (TD62503F) | [IC12,IC17] |
| 53 | VHiVHC244SJ－1 | AG | N | B | IC (VHC244SJ) | [IC2,IC3] |
| 54 | VRD－HT2EY163J | AA | | C | Resistor (1/4W 16KΩ ±5%) | [R8,R9] |
| 55 | VRD－HT2EY911J | AA | | C | Resistor (1/4W 910Ω ±5%) | [R10] |
| 56 | VRS－CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R37] |
| 57 | VRS－CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R39] |
| 58 | VRS－CZ1JD102J | AA | | C | Resistor (1/16W 1.0KΩ ±5%) | [R7,R21,R47,R56] |
| 59 | VRS－CZ1JD103F | AA | | C | Resistor (1/16W 10KΩ ±1%) | [R46,R1] |
| 60 | VRS－CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R5,R31,R29,R3,R6,R22] |
| | VRS－CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R24,R25,R30,R41,R4,R55] |
| | VRS－CZ1JD103J | AA | | C | Resistor (1/16W 10KΩ ±5%) | [R28,R69] |
| 61 | VRS－CZ1JD122J | AA | | C | Resistor (1/16W 1.2KΩ ±5%) | [R16,R13,R19,R33,R52,R53] |
| 62 | VRS－CZ1JD151J | AA | | C | Resistor (1/16W 150Ω ±5%) | [R27] |
| 63 | VRS－CZ1JD203J | AA | | C | Resistor (1/16W 20KΩ ±5%) | [R48,R59,R62,R65] |
| 64 | VRS－CZ1JD222J | AA | | C | Resistor (1/16W 2.2KΩ ±5%) | [R12,R14,R15,R17,R18,R32] |
| | VRS－CZ1JD222J | AA | | C | Resistor (1/16W 2.2KΩ ±5%) | [R54,R11] |
| 65 | VRS－CZ1JD303F | AA | | C | Resistor (1/16W 30KΩ ±1%) | [R2] |
| 66 | VRS－CZ1JD303J | AA | N | C | Resistor (1/16W 30KΩ ±5%) | [R51] |
| 67 | VRS－CZ1JD561J | AA | | C | Resistor (1/16W 560Ω ±5%) | [R35] |
| 68 | VRS－CZ1JD562J | AA | | C | Resistor (1/16W 5.6KΩ ±5%) | [R57,R58,R60,R61,R63,R64] |
| 69 | VRS－CZ1JD621J | AA | | C | Resistor (1/16W 620Ω ±5%) | [R34] |
| 70 | VRS－CZ1JD624J | AA | N | C | Resistor (1/16W 620KΩ ±5%) | [R23] |
| 71 | VRS－CZ1JD681J | AA | | C | Resistor (1/16W 680Ω ±5%) | [R68] |
| 72 | VRS－CZ1JD752J | AA | | C | Resistor (1/16W 7.5KΩ ±5%) | [R26,R43,R44] |
| 73 | VRS－CZ1JD911J | AA | N | C | Resistor (1/16W 910Ω ±5%) | [R38,R36] |
| 74 | VRS－RE3DA1R0J | AB | | C | Resistor (2W 1.0Ω ±5%) | [R20,R42] |
| 75 | VS2SB1197／／－1 | AC | | B | Transistor (2SB1197) | [Q8,Q9,Q10] |
| 76 | VS2SK3065＋＋－1 | AG | N | B | Transistor (2SK3065) | [Q11] |
| 77 | VSDTA114YK／－1 | AC | | B | Transistor (DTA114YK) | [Q2,Q3,Q6] |
| 78 | VSDTC114YK／－1 | AC | | B | Transistor (DTC114YK) | [Q4,Q5,Q7] |
| 79 | VSUPA502T／／－1 | AD | | B | Transistor (UPA502T) | [Q1] |
| | (Unit) | | | | | |
| 901 | CPWBN1450FCE1 | BF | N | E | Scanner control PWB | |
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## 40 CIS Control PWB[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | QCNCM0880FCZZ | AF | | C | Connector (26pin) | [CN100] |
| 2 | QCNCM0923FC12 | AE | | C | Connector (12pin) | [CN1] |
| 3 | QCNCW1160FCZZ | AD | N | C | Connector (FFC9604S35F) | [CN2] |
| 4 | RFiLN6012RCZZ | AB | | C | EMI filter (E103) | [NF2,11] |
| 5 | RFiLZ1005LCZZ | AB | | C | EMI filter (EXC-EMT103DT) | [NF100,4,10,12,13] |
| 6 | VCCCCZ1HH101J | AA | | C | Capacitor (50WV 100pF) | [C4,5,8,9,10,11,22] |
| | VCCCCZ1HH101J | AA | | C | Capacitor (50WV 100pF) | [C23,24,25,31,32,33,34] |
| | VCCCCZ1HH101J | AA | | C | Capacitor (50WV 100pF) | [C40,48,49,51,52,53,60,61,62] |
| 7 | VCEAYU1EC476M | AC | N | C | Capacitor (25WV 47μF) | [C3,15,26,28,41,54] |
| 8 | VCEAYU1VC476M | AC | N | C | Capacitor (25WV 47μF) | [C18] |
| 9 | VCKYCZ1CF104Z | AB | | C | Capacitor (35WV 0.10μF) | [C100,1,2,7,12,13,17,27] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (35WV 0.10μF) | [C29,30,35,36,37,42,43] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (35WV 0.10μF) | [C45,46,50,55,58,63,64] |
| | VCKYCZ1CF104Z | AB | | C | Capacitor (35WV 0.10μF) | [C65,66] |
| 10 | VCKYCZ1HB102K | AA | | C | Capacitor (50WV 1000pF) | [C16,20,21,57,59] |
| 11 | VCKYCZ1HF103Z | AA | | C | Capacitor (0.01μF/50V) | [C6,14,19,38,39,44,56] |
| 12 | VHi74VHC04M－1 | AE | N | B | IC (74VHC04M) | [IC4] |
| 13 | VHi74VHCT240X | AF | | B | IC (74VHCT240X) | [IC100] |
| 14 | VHi7SZ125M5－1 | AE | N | B | IC (7SZ125M5) | [IC2] |
| 15 | VHi90LV27AW－1 | AQ | N | B | IC (90LV27AW) | [IC5] |
| 16 | VHiD82825GM－1 | BK | N | B | IC (D82825GM) | [IC1] |

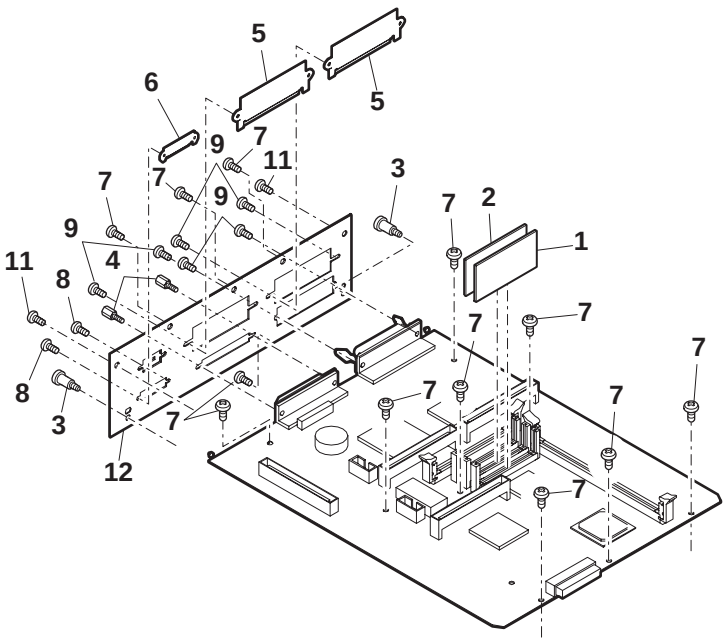
## 40 CIS Control PWB[AR-EF1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 17 | VHiFS781BZB-1 | AP | | B | IC (FS781BZB) | [IC6] |
| 18 | VHiM3064ATC-1 | AX | N | B | IC (M3064ATC) | [IC7] |
| 19 | VHiVHC244SJ-1 | AG | N | B | IC (VHC244SJ) | [IC3] |
| 20 | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R5,15,18,19,20,21,34] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R35,43,44,45,46,48,49] |
| | VRS-CZ1JD000J | AA | | C | Resistor (1/16W 0Ω ±5%) | [R50,51,52,53,54,55,59] |
| 21 | VRS-CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R1,2,3,4,9,10,14,22] |
| | VRS-CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R23,24,25,37,38,39,40] |
| | VRS-CZ1JD101J | AA | | C | Resistor (1/16W 100Ω ±5%) | [R41,47,56,57] |
| 22 | VRS-CZ1JD102J | AA | | C | Resistor (1/16W 1.0KΩ ±5%) | [R100,17,26,27,28,29,30] |
| | VRS-CZ1JD102J | AA | | C | Resistor (1/16W 1.0KΩ ±5%) | [R31,32,33,36,42] |
| 23 | VRS-CZ1JD222J | AA | | C | Resistor (1/16W 2.2KΩ ±5%) | [R6,7,8,11,12,13] |
| 24 | VRS-CZ1JD332F | AA | | C | Resistor (1/16W 3.3KΩ ±1%) | [R58] |
| | (Unit) | | | | | |
| 901 | CPWBN1458FCE1 | BF | N | E | CIS control PWB | |

## 41 MFP Controler PWB[AR-M11]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| 1 | VHi28F322L01F | BE | N | B | MFP flash ROM A J (28F322L01F) | [Japan] |
| | VHi28F322L03F | BF | N | B | MFP flash ROM A EX (28F322L03F) | [except Japan] |
| 2 | VHi28F322L02F | BF | N | B | MFP flash ROM B J (28F322L02F) | [Japan] |
| | VHi28F322L04F | BL | N | B | MFP flash ROM B EX (28F322L04F) | [except Japan] |
| 3 | LX-BZ0828FCZZ | AD | | C | Handle fixing screw | |
| 4 | LX-BZ0921FCZ1 | AE | N | C | Scanner Screw | |
| 5 | PCOVP1557FCZZ | AC | | C | LAN/option cover | |
| 6 | PCOVP1560FCZZ | AC | N | C | FAX I/F cover | |
| 7 | XBBSD30P06000 | AA | | C | Screw (3×6) | |
| 8 | XBPSD26P06000 | AA | | C | Screw (2.6×6) | |
| 9 | XBPSD30P06000 | AA | | C | Screw (3×6) | |
| 11 | XHBSE30P06000 | AA | | C | Screw (3×6) | |
| 12 | LPLTM5765FCZ1 | AH | N | C | Control joint plate | |

## 41 MFP Controler PWB[AR-M11]




FCP05057

## 42 Packing material & Accessories[ARM11]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 2 | S P A K P 2 7 9 2 R C Z Z | AE | | D | Vinyl bag (460×500mm) |
| 4 | S P A K A 6 1 4 4 F C Z Z | AH | N | D | Packing add B |
| 5 | S P A K A 6 1 4 3 F C Z Z | AN | N | D | Packing add A |
| 6 | S P A K C 6 1 4 2 F C Z Z | AP | N | D | Packing case [Japan] |
| | S P A K C 6 1 4 2 F C 1 1 | AP | N | D | Packing case [USA] |
| | S P A K C 6 1 4 2 F C 1 2 | AP | N | D | Packing case [Europe] |
| | S P A K C 6 1 4 2 F C 1 3 | AP | N | D | Packing case [Other countries] |
| | | | | | |
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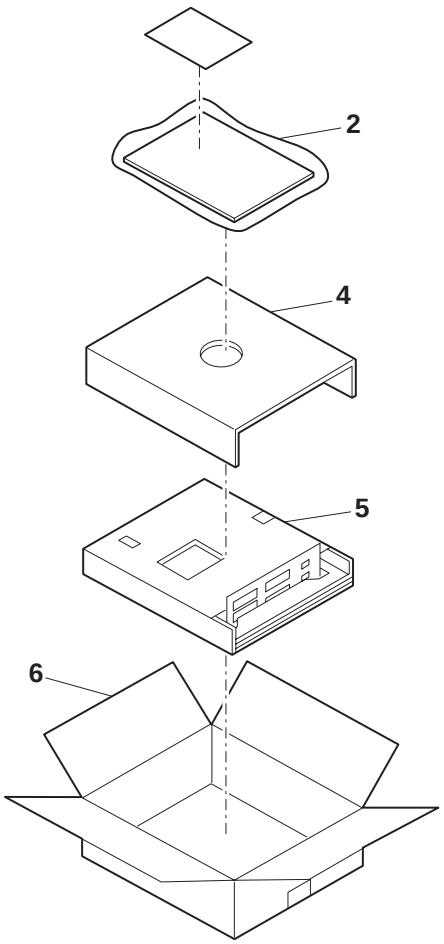
## 42 Packing material & Accessories[ARM11]

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## 43 Packing Material & Accessories[AR-RK1]

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | S P A K A 6 1 3 6 F C Z Z | AE | N | D | Protect add |
| 2 | S P A K C 6 1 3 4 D S Z Z | AT | N | D | Packing case (Japan) |
| | S P A K C 6 1 3 4 D S 1 1 | AT | N | D | Packing case (U.S.A Other countries) |
| | S P A K C 6 1 3 4 D S 1 2 | AT | N | D | Packing case (Europe,U.Kngdom,Australia,New Zealand) |
| | S P A K C 6 1 3 4 D S 1 3 | AT | N | D | Packing case (China) |
| 7 | S P A K A 6 1 3 5 F C Z Z | AK | N | D | Sleeve |
| 8 | S P A K A 6 1 3 7 F C Z Z | AK | N | D | Spacer |
| | | | | | |
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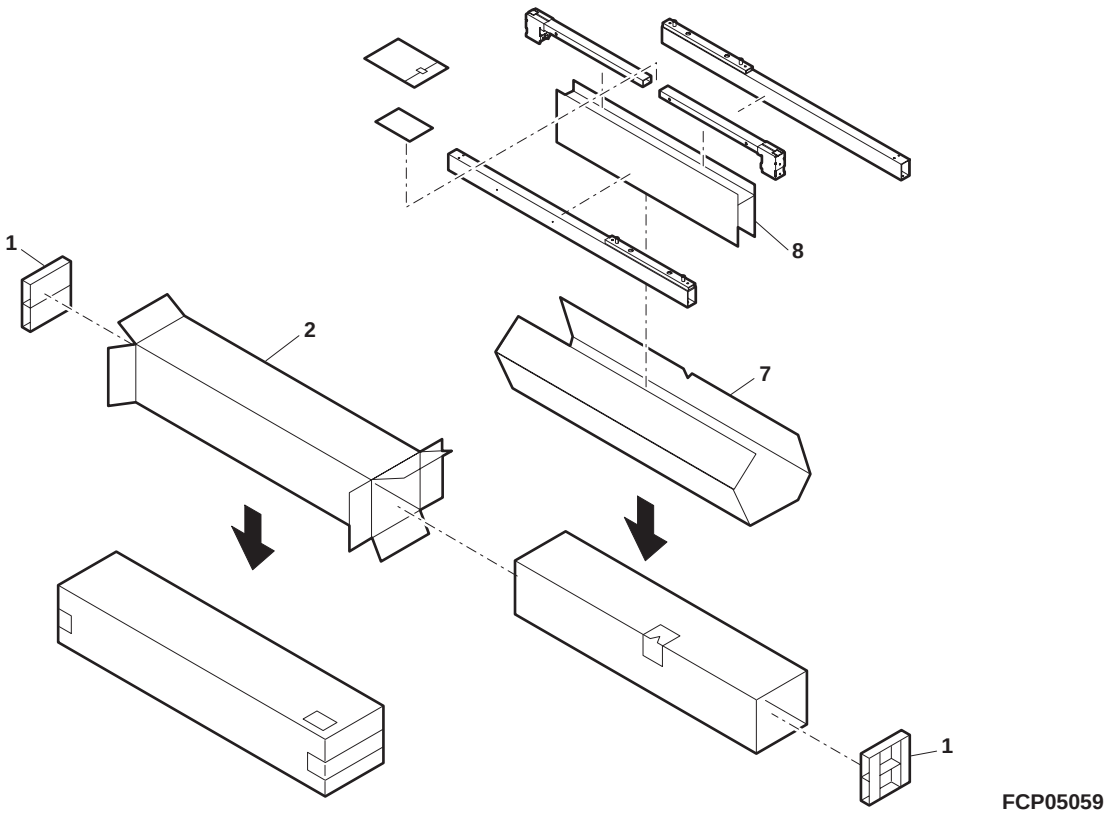
43 Packing Material & Accessories[AR-RK1]



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| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| 【C】 | | | | | |
| CARMP0147DS51 | 28-501 | BA | N | E | |
| CBTN-0250FC01 | 29- 18 | AH | N | E | |
| CBTN-0251FC01 | 29- 15 | AF | N | E | |
| CBTN-0252FC01 | 29- 13 | AP | N | E | |
| CBTN-0253FC01 | 29- 12 | AN | N | E | |
| CCŌVP1541FC02 | 31- 5 | AT | N | D | |
| CDAiU0619DS51 | 31- 1 | BF | N | E | |
| 〃 | 32-901 | BF | N | E | |
| CFiLW0282FC01 | 29- 16 | AF | N | D | |
| CFiLW0283FC01 | 29- 17 | AF | N | D | |
| CFiLW0284FC01 | 29- 14 | AF | N | D | |
| CGLSP0003RS51 | 27- 10 | BC | N | B | |
| CGLSP0003RS52 | 27- 10 | BF | N | B | |
| CGLSP0102DS51 | 27- 13 | BF | N | B | |
| CHLDZ1446FC31 | 31-501 | BC | N | E | |
| CiNSR2085FC51 | 17- 20 | AS | N | D | |
| CiNSR2127FC51 | 17- 20 | AR | N | D | |
| CiNSZ2086FC51 | 17- 20 | AS | N | D | |
| CiNSZ2128FC51 | 17- 20 | AR | N | D | |
| CPLTM0031RS51 | 31- 41 | BS | N | E | |
| CPLTM5719FC01 | 31- 31 | AG | N | C | |
| CPLTM5746FC01 | 35- 7 | AE | N | C | |
| CPLTM5882FC02 | 34- 47 | AN | N | C | |
| CPNLC0244DS51 | 27- 26 | CV | N | D | |
| CPNLC0244DS52 | 27- 26 | CT | N | D | |
| CPNLC0245FC01 | 29- 20 | AY | N | D | |
| CPNLC0245FC02 | 29- 20 | AY | N | D | |
| CPNLH0020QS12 | 1- 26 | AK | N | D | |
| CPNLH0020QS13 | 1- 26 | AK | N | D | |
| CPNLH0020QS22 | 1- 26 | AK | N | D | |
| CPNLH0020QS23 | 1- 26 | AK | N | D | |
| CPWBF1449FC31 | 32- 9 | BH | N | E | |
| CPWBF1453FCE1 | 28- 9 | BN | N | E | |
| CPWBF1454FCE1 | 31- 45 | BN | N | E | |
| CPWBF1459DS51 | 33- 26 | BN | N | E | |
| CPWBF1469FCE1 | 29- 11 | BN | N | E | |
| 〃 | 38-901 | BN | N | E | |
| CPWBF1470DS51 | 29- 4 | BN | N | E | |
| CPWBF1501DS51 | 33- 16 | BN | N | E | |
| CPWBN1450FCE1 | 30- 13 | BF | N | E | |
| 〃 | 39-901 | BF | N | E | |
| CPWBN1451DS51 | 30- 18 | BF | N | E | |
| CPWBN1458FCE1 | 36- 1 | BF | N | E | |
| 〃 | 40-901 | BF | N | E | |
| CPWBN1471FCE1 | 29- 1 | BF | N | E | |
| CSFTZ2586FC31 | 31-502 | AZ | N | E | |
| 【D】 | | | | | |
| DHAi-3150FCZZ | 31- 40 | AD | N | C | |
| DHAi-3152FCZZ | 30- 19 | AF | N | C | |
| DHAi-3153FCZZ | 30- 38 | AC | N | C | |
| DHAi-3161FCZZ | 33- 29 | AK | N | C | |
| DHAi-3162FCZZ | 35- 13 | AK | N | C | |
| DHAi-3166FCZZ | 33- 27 | AY | N | C | |
| DHAi-3191FCZZ | 29- 6 | AF | N | C | |
| DHAi-3192FCZZ | 29- 5 | AD | N | C | |
| DHAi-3193FCZZ | 29- 22 | AC | N | C | |
| DHAi-3281FCZZ | 34- 62 | AH | N | C | |
| DHAi-3303FCZZ | 30- 28 | BC | N | C | |
| DHAi-3336FCZZ | 34- 79 | AB | N | C | |
| DUNT-7079FCZZ | 36- 4 | CC | N | E | |
| DUNT-7132DSZZ | 27- 8 | CY | N | E | |
| DUNT-7133DSZZ | 27- 8 | CZ | N | E | |
| 【G】 | | | | | |
| GCAB-0940FCZ2 | 1- 5 | BA | N | D | |
| GCAB-0942FCZZ | 27- 5 | AP | N | D | |
| 〃 | 28- 12 | AP | N | D | |
| GCAB-0943FCZZ | 27- 1 | AK | N | D | |
| GCAB-0945FCZZ | 27- 7 | AR | N | D | |
| 【H】 | | | | | |
| HPNLC0243FCZ1 | 1- 11 | AP | N | D | |
| HPNLC0244FCZZ | 29- 19 | AZ | N | D | |
| HPNLH0246FCZZ | 29- 10 | BF | N | D | |
| 【J】 | | | | | |
| JKNBZ0141FCZZ | 34- 56 | AH | N | C | |
| 【L】 | | | | | |
| LBNDJ0043FCZZ | 30- 37 | AA | | C | |
| LBSHC0161FCZZ | 31- 4 | AB | | C | |
| LBSHZ1102CCZZ | 28- 3 | AC | | C | |

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| LDAiU0619FCZZ | 32- 5 | AT | N | C | |
| LDAiU0627FCZZ | 27- 27 | AZ | N | D | |
| LFiX-0284FCZZ | 31- 12 | AC | | C | |
| LFiX-0537FCZZ | 30- 39 | AD | | C | |
| LFiX-0543FCZZ | 27- 12 | AG | N | D | |
| LFiX-0544FCZZ | 27- 9 | AG | N | D | |
| LFiX-0545FCZZ | 32- 12 | AC | N | C | |
| LFiX-0568FCZZ | 33- 12 | AC | N | C | |
| LFiX-0569FCZZ | 30- 46 | AD | N | C | |
| LFRM-1022FCZZ | 34- 36 | AK | N | D | |
| LHLDW0429FCZZ | 34- 52 | AB | | C | |
| LHLDW0595FCZZ | 30- 35 | AC | | C | |
| LHLDW1007LCZZ | 30- 34 | AD | | C | |
| LHLDW1009ACZZ | 34- 40 | AA | | C | |
| 〃 | 34- 60 | AA | | C | |
| LHLDW1115FCZZ | 30- 3 | AD | | C | |
| 〃 | 30- 14 | AD | | C | |
| LHLDW1201CCZZ | 30- 45 | AA | | C | |
| LHLDW1264FCZZ | 30- 36 | AD | | C | |
| LHLDW2101SCZZ | 34- 59 | AB | | C | |
| LHLDZ1085FCZ2 | 28- 8 | AD | N | C | |
| LHLDZ1381FCZZ | 31- 44 | AL | | C | |
| LHLDZ1458FCZZ | 29- 9 | AF | N | C | |
| LHLDZ1459FCZZ | 29- 7 | AE | N | C | |
| LHLDZ1483FCZZ | 34- 13 | AF | | C | |
| LHLDZ1484FCZZ | 34- 67 | AC | N | C | |
| LHLDZ1485FCZZ | 34- 32 | AC | N | C | |
| LHLDZ1486FCZZ | 34- 45 | AC | N | C | |
| LHLDZ1505FCZZ | 31- 2 | AC | N | C | |
| LPiNS0014QSGZ | 29- 21 | AC | N | C | |
| LPiNS1031HCZZ | 34- 48 | AA | | C | |
| LPLTM2573FCZ1 | 33- 43 | AD | | C | |
| LPLTM5720FCZZ | 30- 20 | AK | N | C | |
| LPLTM5723FCZZ | 30- 10 | AG | N | C | |
| LPLTM5765FCZ1 | 12- 35 | AH | N | C | |
| 〃 | 41- 12 | AH | N | C | |
| LPLTM5785FCZZ | 34- 53 | AC | N | C | |
| LPLTM5877FCZZ | 30- 24 | AE | N | C | |
| LPLTM5884FCZZ | 34- 51 | AW | N | C | |
| LPLTM5887FCZZ | 33- 10 | AL | N | C | |
| LPLTM5889FCZZ | 34- 57 | AC | N | C | |
| LPLTM5891FCZZ | 35- 1 | AE | N | C | |
| LPLTM5927FCZZ | 30- 22 | AF | N | C | |
| LPLTM5928FCZZ | 34- 23 | AG | N | C | |
| LPLTM5929FCZZ | 34- 61 | AR | N | C | |
| LPLTM5930FCZZ | 35- 5 | AD | N | C | |
| LPLTM5932FCZZ | 35- 24 | AC | | C | |
| LPLTP5743FCZZ | 33- 17 | AF | | C | |
| LPLTP5747FCZZ | 35- 8 | AC | N | C | |
| LPLTP5748FCZZ | 35- 32 | AD | N | C | |
| LPLTP5777FCZZ | 33- 38 | AG | N | D | |
| LPLTP5778FCZZ | 33- 37 | AG | N | D | |
| LPLTP5938FCZZ | 33- 44 | AC | N | C | |
| LPLTP5960FCZZ | 30- 44 | AE | N | C | |
| LRALM0183FCZZ | 30- 31 | AG | N | C | |
| LRALM0184FCZZ | 30- 41 | AG | N | C | |
| LSŌU-0177FCGZ | 37- 2 | AP | | D | |
| LSŌU-0179FCZZ | 37- 2 | AR | | D | |
| LSTPP0314FCZZ | 35- 21 | AA | | C | |
| LSTPP0353FCZZ | 35- 3 | AE | N | C | |
| LSTPP0359FCZZ | 34- 65 | AE | N | C | |
| LSTYM0261FCZZ | 32- 11 | AB | N | C | |
| LSTYM0288FCZZ | 34- 31 | AK | N | C | |
| LX-BZ0004QSZZ | 30- 42 | AB | | C | |
| LX-BZ0049FCZZ | 31- 19 | AB | | C | |
| LX-BZ0324FCZZ | 31- 22 | AA | | C | |
| LX-BZ0465FCZZ | 27- 24 | AA | | C | |
| LX-BZ0680FCZZ | 36- 5 | AB | | C | |
| LX-BZ0776FCZZ | 27- 6 | AG | | C | |
| LX-BZ0787FCZZ | 37- 5 | AH | | C | |
| LX-BZ0828FCZZ | 12- 56 | AD | | C | |
| 〃 | 41- 3 | AD | | C | |
| LX-BZ0842FCZZ | 27- 4 | AG | | C | |
| LX-BZ0921FCZ1 | 12- 25 | AE | N | C | |
| 〃 | 41- 4 | AE | N | C | |
| LX-BZ0931FCZZ | 34- 76 | AC | N | C | |
| LX-WZ0119FCZZ | 31- 35 | AA | | C | |
| 【M】 | | | | | |
| MARMP0147FCZ2 | 28- 10 | AK | N | C | |
| MARMP0148FCZ2 | 28- 1 | AK | N | C | |

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|---|---|---|---|---|---|
| MARMP0243FCZZ | 33- 41 | AD | | C | |
| MARMP0248FCZZ | 35- 15 | AE | | C | |
| MARMP0284FCZZ | 34- 26 | AC | N | C | |
| MHNG-0208FCZZ | 33- 7 | BA | N | C | |
| MHNG-0209FCZZ | 34- 34 | BC | N | C | |
| MLEVP0794FCZZ | 33- 34 | AC | N | C | |
| MLEVP0796FCZZ | 35- 14 | AC | N | C | |
| MLEVP0797FCZZ | 35- 26 | AC | N | C | |
| MLEVP0804FCZZ | 35- 16 | AC | N | C | |
| MLEVP0837FCZZ | 34- 70 | AC | N | C | |
| MSLi-0138FCZZ | 31- 15 | AC | | C | |
| 〃 | 32- 8 | AC | | C | |
| MSPRC2865FCZ1 | 27- 21 | AB | N | C | |
| MSPRC3001FCZZ | 34- 69 | AB | N | C | |
| MSPRD2870FCZ1 | 35- 22 | AC | N | C | |
| MSPRD2879FCZZ | 35- 27 | AB | N | C | |
| MSPRD3002FCZZ | 34- 33 | AC | N | C | |
| MSPRD3020FCZ1 | 31- 49 | AG | N | C | |
| MSPRP2825FCZZ | 32- 14 | AC | N | C | |
| MSPRP2830FCZZ | 33- 19 | AA | | C | |
| MSPRP2832FCZZ | 35- 17 | AC | N | C | |
| MSPRP2878FCZZ | 34- 8 | AC | N | C | |
| MSPRP3009FCZZ | 29- 2 | AD | N | C | |
| MSPRP3011FCZZ | 34- 39 | AC | N | C | |
| MSPRT1563FCZZ | 28- 7 | AC | | C | |
| MSPRT2846FCZZ | 31- 30 | AC | N | C | |
| MSPRT2863FCZZ | 35- 31 | AB | N | C | |
| MSPRT2864FCZZ | 35- 9 | AC | N | C | |
| 【N】 | | | | | |
| NBLTH0329FCZZ | 31- 18 | AG | N | B | |
| NBLTH0363FCZZ | 34- 18 | AG | N | B | |
| NBLTH0364FCZZ | 34- 44 | AG | N | B | |
| NBRGC0133FCZ1 | 31- 42 | AC | | C | |
| NBRGC0136FCZZ | 34- 12 | AC | | C | |
| NBRGM0096FCZ1 | 34- 17 | AB | | C | |
| NGERH0027QSZZ | 31- 33 | AH | | C | |
| NGERH1476FCZZ | 34- 42 | AD | N | C | |
| NGERH1477FCZZ | 34- 37 | AC | N | C | |
| NGERH1478FCZZ | 34- 43 | AE | N | C | |
| NGERP1385FCZZ | 33- 22 | AF | | C | |
| NGERR1386FCZZ | 33- 21 | AE | | C | |
| NPLYZ0005QSZZ | 31- 24 | AG | | C | |
| NPLYZ0006QSZZ | 31- 26 | AD | | C | |
| NPLYZ0013QSZZ | 31- 23 | AL | | C | |
| NPLYZ0338FCZZ | 31- 20 | AN | | C | |
| NPLYZ0375FCZZ | 34- 46 | AC | | C | |
| NPLYZ0397FCZZ | 34- 20 | AK | | C | |
| NPLYZ0398FCZZ | 34- 16 | AC | | C | |
| NPLYZ0399FCZZ | 31- 9 | AG | N | C | |
| NRŌLP0011QSZZ | 27- 18 | AD | | C | |
| NRŌLP1364FCZZ | 34- 28 | AC | | C | |
| NRŌLR1312FCZZ | 34- 19 | AN | | C | |
| NRŌLR1317FCZZ | 34- 21 | AP | | C | |
| NRŌLR1318FCZZ | 34- 30 | AR | N | C | |
| NRŌLR1320FCZZ | 34- 50 | AQ | N | C | |
| NSFTZ1805FCZZ | 28- 5 | AE | | C | |
| NSFTZ2586FCZZ | 31- 25 | AS | N | C | |
| NSFTZ2599FCZ1 | 34- 10 | AW | N | C | |
| NSFTZ2600FCZZ | 34- 7 | AM | N | C | |
| NSFTZ2601FCZZ | 27- 20 | AH | N | C | |
| NSFTZ2659FCZZ | 35- 23 | AR | N | C | |
| NSFTZ2678FCZZ | 34- 15 | AL | N | C | |
| 【P】 | | | | | |
| PBRSS0209FCZZ | 34- 77 | AG | N | B | |
| PCAPH0010GCZZ | 26- 1 | AD | | D | |
| PCLC-0302FCZZ | 34- 22 | AT | N | B | |
| PCLC-0303FCZZ | 34- 14 | AT | N | B | |
| PCLR-0426FCZZ | 34- 49 | AD | | C | |
| PCLR-0471FCZZ | 34- 6 | AG | N | C | |
| PCŌVP1468FCZZ | 26- 2 | AD | | D | |
| PCŌVP1518FCZZ | 33- 9 | AE | | D | |
| PCŌVP1549FCZZ | 33- 39 | AU | N | D | |
| PCŌVP1557FCZZ | 12- 38 | AC | | C | |
| 〃 | 41- 5 | AC | | C | |
| PCŌVP1560FCZZ | 12- 37 | AC | N | C | |
| 〃 | 41- 6 | AC | N | C | |
| PCŌVP1566FCZZ | 27- 3 | AS | N | D | |
| PCŌVP1593FCZZ | 36- 3 | AF | N | D | |
| PCŌVP1594FCZZ | 34- 1 | AG | N | D | |
| PCŌVP1595FCZZ | 33- 3 | AG | N | D | |
| PCŌVP1598FCZZ | 30- 26 | AL | N | D | |

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| PCŌVP1600FCZZ | 30- 6 | AF | N | D | |
| PCŌVP1615FCZZ | 33- 5 | AE | N | D | |
| PCŌVP1624FCZZ | 27- 23 | AC | N | D | |
| PCŌVP1644FCZZ | 33- 14 | AD | N | C | |
| PCŌVP1645FCZZ | 33- 24 | AH | N | C | |
| PCUSF0334FCZZ | 32- 10 | AP | | C | |
| PCUSS0372FCZZ | 34- 64 | AD | N | C | |
| PCUSS0373FCZZ | 34- 72 | AB | N | C | |
| PCUSU0203FCZZ | 31- 7 | AE | | C | |
| 〃 | 32- 6 | AE | | C | |
| PGiDH1897FCZZ | 34- 74 | AT | N | C | |
| PGiDM1890FCZZ | 31- 8 | AC | N | C | |
| PGiDM1899FCZZ | 35- 30 | AY | N | C | |
| PGiDM1900FCZZ | 27- 16 | AR | N | C | |
| PGiDM1901FCZZ | 27- 17 | AQ | N | C | |
| PGiDM1953FCZZ | 34- 4 | AS | N | C | |
| PGiDM1964FCZZ | 31- 50 | AC | N | C | |
| PGLSP0103FCZZ | 34- 75 | AV | N | C | |
| PGUMS0002QSZZ | 31- 32 | AL | | C | |
| PGUMS0283FCZ1 | 30- 29 | AA | N | C | |
| PGUMS0296FCZZ | 33- 20 | AD | N | C | |
| PGUMS0298FCZZ | 33- 15 | AC | N | C | |
| PGUMS0299FCZZ | 33- 25 | AH | N | C | |
| PMAGT0072FCZZ | 35- 11 | AF | | C | |
| PMiR-0164FCZZ | 32- 13 | AP | N | B | |
| PMiR-0165FCZZ | 31- 13 | AP | N | B | |
| PMLT-1256FCZZ | 27- 29 | AC | N | C | |
| PMLT-1257FCZZ | 27- 30 | AB | N | C | |
| PMLT-1270FCZZ | 34- 55 | AB | N | C | |
| PMLT-1271FCZZ | 35- 28 | AB | N | C | |
| PMLT-1272FCZZ | 34- 3 | AB | N | C | |
| 〃 | 35- 2 | AB | N | C | |
| PMLT-1282FCZZ | 30- 47 | AE | N | C | |
| PMLT-1284FCZZ | 36- 8 | AE | N | C | |
| PMLT-1286FCZZ | 33- 2 | AD | N | C | |
| PREFL0172FCZZ | 32- 3 | AK | | B | |
| PRNGP0090FCZZ | 33- 42 | AA | | C | |
| PSHEP4846FCZZ | 34- 58 | AD | N | C | |
| PSHEP4848FCZZ | 35- 20 | AB | N | C | |
| PSHEP4915FCZZ | 34- 5 | AE | N | C | |
| PSHEP4916FCZ1 | 34- 73 | AF | N | C | |
| PSHEP4927FC10 | 17- 13 | AR | N | D | |
| PSHEP4927FC11 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ1 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ2 | 17- 13 | AM | N | D | |
| PSHEP4927FCZ3 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ4 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ5 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ6 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ7 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ8 | 17- 13 | AR | N | D | |
| PSHEP4927FCZ9 | 17- 13 | AR | N | D | |
| PSHEP4927FCZZ | 17- 13 | AM | N | D | |
| PSHEP4932FCZZ | 30- 7 | AD | N | C | |
| PSHEP4937FCZZ | 35- 29 | AB | N | C | |
| PSHEZ4836FCZZ | 30- 43 | AB | N | C | |
| PSHEZ4841FCZ1 | 30- 40 | AD | N | C | |
| PSHEZ4842FCZZ | 30- 27 | AD | N | C | |
| PSHEZ4843FCZZ | 30- 32 | AC | N | C | |
| PSHEZ4845FCZZ | 33- 1 | AV | N | C | |
| PSHEZ4847FCZZ | 35- 19 | AL | N | C | |
| PSHEZ4878FCZZ | 35- 18 | AC | N | C | |
| PSHEZ4906FCZZ | 29- 24 | AC | N | C | |
| PSHEZ4949FCZZ | 34- 38 | AE | N | C | |
| PSHEZ4957FCZZ | 34- 78 | AC | N | C | |
| PSLDH0178FCZZ | 28- 4 | AD | | C | |
| PSPŌ-0001QSZZ | 27- 19 | AB | | C | |
| PTPE-0265FCZZ | 33- 13 | AC | N | C | |
| PWiR-0191FCZZ | 31- 17 | AQ | N | B | |
| PWiR-0192FCZZ | 31- 16 | AQ | N | B | |
| 【Q】 | | | | | |
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| QCNCM0828FCZZ | 39- 1 | AE | | C | |
| QCNCM0829FCZZ | 39- 2 | AG | | C | |
| QCNCM0880FCZZ | 40- 1 | AF | | C | |
| QCNCM0923FC12 | 40- 2 | AE | | C | |
| QCNCM1146FCZZ | 26- 4 | AE | N | C | |
| QCNCM1148FCZZ | 26- 5 | AP | N | C | |
| QCNCM1166FCZZ | 39- 3 | AK | N | C | |
| QCNCM1167FCZZ | 39- 4 | AP | N | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| QCNCM1171FCZZ | 38- 1 | AE | N | C | |
| QCNCM7014SC1C | 39- 5 | AC | | C | |
| QCNCM7022SC0C | 39- 6 | AB | | C | |
| QCNCM7022SC0E | 39- 7 | AB | | C | |
| QCNCM7022SC0F | 39- 8 | AB | | C | |
| QCNCW0885FCZZ | 39- 9 | AG | | C | |
| QCNCW0946FCZZ | 26- 6 | AH | | C | |
| QCNCW1134FCZZ | 38- 2 | AH | | C | |
| QCNCW1147FCZZ | 26- 7 | AL | N | C | |
| QCNCW1149FCZZ | 26- 8 | AN | N | C | |
| QCNCW1160FCZZ | 40- 3 | AD | N | C | |
| QCNCW7040XC8J | 39- 10 | AP | | C | |
| QCNW-0165FCZZ | 30- 15 | AH | N | C | |
| QCNW-0166FCZZ | 29- 25 | AE | N | C | |
| QCNW-0167FCZZ | 30- 5 | AM | N | C | |
| QCNW-0168FCZZ | 30- 4 | AE | N | C | |
| 〃 | 32- 7 | AE | N | C | |
| QCNW-0170FCZZ | 36- 6 | AH | N | C | |
| QCNW-0181FCZZ | 30- 16 | AH | N | C | |
| QFS-D132CQCZZ | 26- 9 | AG | | A | |
| QFSHB0028FCZZ | 26- 10 | AC | | C | |
| QPiN-0003GCZZ | 26- 11 | AC | | C | |
| QSŌCZ0001QSZZ | 26- 12 | AL | | C | |
| QSŌCZ0002QSZZ | 39- 11 | AD | | C | |
| QSŌCZ0071FCZZ | 39- 12 | AP | | C | |
| QSŌCZ0073FCZZ | 26- 13 | AL | | C | |
| QSŌCZ0079FCZZ | 26- 14 | AN | | C | |
| QSŌCZ6428ACZZ | 26- 15 | AE | | C | |
| 〃 | 39- 13 | AE | | C | |
| QSW-P0005QSZZ | 38- 3 | AC | | B | |
| QSW-Z0531FCZZ | 34- 63 | AL | | B | |
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| RALMB1002LCZZ | 38- 4 | AE | | B | |
| RC-KZ0008QCZZ | 38- 5 | AB | N | C | |
| RCŌRF0041FCZZ | 27- 31 | AH | N | C | |
| RCRMZ6007RCZZ | 39- 14 | AD | | B | |
| RCRS-0007FCZZ | 38- 6 | AD | | B | |
| RCRSP6676RCZZ | 26- 16 | AG | | B | |
| RCRSZ0001QSZZ | 39- 15 | AG | | B | |
| RCRUA0005FCZZ | 26- 17 | AP | | B | |
| RCRUA0007FCZZ | 26- 18 | AP | | B | |
| RCRUA0008FCZZ | 26- 19 | AP | | B | |
| RCRUA0009FCZZ | 26- 20 | AP | | B | |
| RCRUA0012FCZZ | 26- 21 | AP | | B | |
| RFiLN0048FCZZ | 26- 22 | AC | | C | |
| RFiLN0049FCZZ | 39- 16 | AE | N | C | |
| RFiLN0051FCZZ | 26- 23 | AC | N | C | |
| RFiLN6012RCZZ | 39- 17 | AB | | C | |
| 〃 | 40- 4 | AB | | C | |
| RFiLZ1005LCZZ | 39- 18 | AB | | C | |
| 〃 | 40- 5 | AB | | C | |
| RH-DZ0016FCZZ | 38- 7 | AB | | B | |
| RH-iX2196SCZZ | 39- 19 | AG | | B | |
| RLMPD0658FCZZ | 32- 1 | BA | N | B | |
| RMŌTS0857FCZZ | 31- 27 | AZ | N | B | |
| RMŌTS0876FCZZ | 34- 35 | BD | N | B | |
| RMPTR4100ACZZ | 26- 24 | AB | | B | |
| RMPTR4103ACZZ | 26- 25 | AB | | B | |
| 〃 | 39- 20 | AB | | B | |
| RMPTR4330ACZZ | 26- 26 | AB | | B | |
| RMPTR4472ACZZ | 26- 27 | AB | | B | |
| RPLU-0336FCZZ | 34- 25 | AS | N | B | |
| RPLU-0347FCZZ | 35- 12 | AQ | N | B | |
| 【S】 | | | | | |
| SPAKA0307QSZZ | 37- 3 | AD | | D | |
| SPAKA6075DSZZ | 37- 1 | AA | N | D | |
| SPAKA6132FCZZ | 37- 6 | AT | N | D | |
| SPAKA6133FCZZ | 37- 8 | AU | N | D | |
| SPAKA6135FCZZ | 43- 7 | AK | N | D | |
| SPAKA6136FCZZ | 43- 1 | AE | N | D | |
| SPAKA6137FCZZ | 43- 8 | AK | N | D | |
| SPAKA6143FCZZ | 42- 5 | AN | N | D | |
| SPAKA6144FCZZ | 42- 4 | AH | N | D | |
| SPAKA6265FCZZ | 37- 10 | AC | N | D | |
| SPAKC6118DS12 | 17- 5 | AU | N | D | |
| SPAKC6118DS13 | 17- 5 | AU | N | D | |
| SPAKC6122DS17 | 17- 5 | AU | N | D | |
| SPAKC6122DS18 | 17- 5 | AU | N | D | |
| SPAKC6122DS19 | 17- 5 | AU | N | D | |
| SPAKC6122DS20 | 17- 5 | AU | N | D | |
| SPAKC6122DS21 | 17- 5 | AU | N | D | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| SPAKC6122DS22 | 17- 5 | AU | N | D | |
| SPAKC6131DS11 | 37- 9 | AF | N | D | |
| SPAKC6131DSZZ | 37- 9 | AF | N | D | |
| SPAKC6134DS11 | 43- 2 | AT | N | D | |
| SPAKC6134DS12 | 43- 2 | AT | N | D | |
| SPAKC6134DS13 | 43- 2 | AT | N | D | |
| SPAKC6134DSZZ | 43- 2 | AT | N | D | |
| SPAKC6142FC11 | 42- 6 | AP | N | D | |
| SPAKC6142FC12 | 42- 6 | AP | N | D | |
| SPAKC6142FC13 | 42- 6 | AP | N | D | |
| SPAKC6142FCZZ | 42- 6 | AP | N | D | |
| SPAKP2792RCZZ | 42- 2 | AE | | D | |
| SSAKZ0003QSZZ | 37- 7 | AF | | D | |
| 【T】 | | | | | |
| TCADZ1178FCZZ | 37- 4 | AB | | D | |
| TiNSD2092GHZZ | 17- 20 | AS | N | D | |
| TiNSD2134GHZZ | 17- 20 | AS | N | D | |
| TiNSE2077FCZZ | 17- 20 | AQ | N | D | |
| TiNSE2078FCZZ | 17- 20 | AW | N | D | |
| TiNSE2081GHZZ | 17- 20 | AS | N | D | |
| TiNSE2087FCZZ | 17- 20 | AX | N | D | |
| TiNSE2119FCZZ | 17- 20 | AN | N | D | |
| TiNSE2120FCZZ | 17- 20 | AV | N | D | |
| TiNSE2123GHZZ | 17- 20 | AS | N | D | |
| TiNSE2129FCZZ | 17- 20 | AV | N | D | |
| TiNSE2181FCZZ | 17- 20 | AT | N | D | |
| TiNSF2079FCZZ | 17- 20 | AW | N | D | |
| TiNSF2121FCZZ | 17- 20 | AV | N | D | |
| TiNSG2080GHZZ | 17- 20 | AS | N | D | |
| TiNSG2122GHZZ | 17- 20 | AS | N | D | |
| TiNSH2084GHZZ | 17- 20 | AS | N | D | |
| TiNSH2126GHZZ | 17- 20 | AS | N | D | |
| TiNSi2083GHZZ | 17- 20 | AS | N | D | |
| TiNSi2125GHZZ | 17- 20 | AS | N | D | |
| TiNSJ2076FCZZ | 17- 20 | AQ | N | D | |
| TiNSJ2118FCZZ | 17- 20 | AN | N | D | |
| TiNSS2082FCZZ | 17- 20 | AW | N | D | |
| TiNSS2124FCZZ | 17- 20 | AV | N | D | |
| TiNSW2089GHZZ | 17- 20 | AS | N | D | |
| TiNSW2131GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2090GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2091GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2093GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2094GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2095GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2132GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2133GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2135GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2136GHZZ | 17- 20 | AS | N | D | |
| TiNSZ2137GHZZ | 17- 20 | AS | N | D | |
| TLABH4440FCZZ | 33- 45 | AF | | D | |
| TLABZ4335FCZZ | 32- 15 | AB | | D | |
| 【U】 | | | | | |
| UBATi0014FCZZ | 26- 28 | AN | | B | |
| 【V】 | | | | | |
| VCCCCZ1HH101J | 26- 29 | AA | | C | |
| 〃 | 40- 6 | AA | | C | |
| VCCCCZ1HH220J | 26- 30 | AA | | C | |
| 〃 | 39- 21 | AA | | C | |
| VCEAGA1AW476M | 39- 22 | AA | | C | |
| VCEAGA1AW477M | 39- 23 | AB | | C | |
| VCEAGA1CW477M | 39- 24 | AB | | C | |
| VCEAGA1HW224M | 39- 25 | AA | | C | |
| VCEAGA1VW476M | 39- 26 | AB | | C | |
| VCEAJU1CW476M | 38- 8 | AB | | C | |
| VCEAPH1HC105M | 26- 31 | AC | | C | |
| VCEAPS1AC227M | 26- 32 | AD | | C | |
| VCEAPS1CC106M | 26- 33 | AC | | C | |
| VCEAPS1CC226M | 26- 34 | AC | | C | |
| VCEAPS1CC476M | 26- 35 | AC | | C | |
| VCEAYU1EC476M | 40- 7 | AC | N | C | |
| VCEAYU1VC476M | 40- 8 | AC | N | C | |
| VCEAZU1VW477M | 39- 27 | AD | | C | |
| VCKYCZ1CB103K | 39- 28 | AA | | C | |
| VCKYCZ1CF104Z | 26- 36 | AB | | C | |
| 〃 | 40- 9 | AB | | C | |
| VCKYCZ1EF223Z | 39- 29 | AA | | C | |
| VCKYCZ1HB102K | 26- 37 | AA | | C | |
| 〃 | 39- 30 | AA | | C | |
| 〃 | 40- 10 | AA | | C | |
| VCKYCZ1HB222K | 39- 31 | AA | | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| VCKYCZ1HF103Z | 26- 38 | AA | | C | |
| 〃 | 39- 32 | AA | | C | |
| 〃 | 40- 11 | AA | | C | |
| VCKYPU1EB223Z | 38- 9 | AB | | C | |
| VCKYPU1HB101K | 38- 10 | AA | | C | |
| VCQYNA1HM103K | 39- 33 | AA | | C | |
| VHD1SS133//-1 | 38- 11 | AA | | B | |
| VHDDAN202K/-1 | 39- 34 | AB | | B | |
| VHDDAP202K/-1 | 39- 35 | AB | | B | |
| VHDDAP202U/-1 | 26- 39 | AB | | B | |
| VHDDSM1D1//-1 | 39- 36 | AB | | B | |
| VHDM1FL20U+-1 | 39- 37 | AC | N | B | |
| VHDMA704A//-1 | 39- 38 | AC | | B | |
| VHDRB451F//-1 | 26- 40 | AD | | B | |
| VHDRLS73///-1 | 26- 41 | AA | | B | |
| VHEHZS3B3//-1 | 39- 39 | AB | | B | |
| VHi28F081L02C | 30- 12 | BB | N | B | |
| VHi28F322L01F | 12- 54 | BE | N | B | |
| 〃 | 41- 1 | BE | N | B | |
| VHi28F322L02F | 12- 55 | BF | N | B | |
| 〃 | 41- 2 | BF | N | B | |
| VHi28F322L03F | 12- 54 | BF | N | B | |
| 〃 | 41- 1 | BF | N | B | |
| VHi28F322L04F | 12- 55 | BL | N | B | |
| 〃 | 41- 2 | BL | N | B | |
| VHi65946P07-1 | 26- 42 | BA | | B | |
| VHi74LCX08MTC | 26- 43 | AE | | B | |
| VHi74LCX14MTC | 26- 44 | AE | | B | |
| VHi74LCX244MT | 26- 45 | AG | | B | |
| VHi74LCX32MTC | 26- 46 | AE | | B | |
| VHi74LVX16128 | 26- 47 | AP | | B | |
| VHi74VHC04M-1 | 39- 40 | AE | N | B | |
| 〃 | 40- 12 | AE | N | B | |
| VHi74VHC32M-1 | 39- 41 | AD | N | B | |
| VHi74VHCT240X | 40- 13 | AF | | B | |
| VHi7SZ125M5-1 | 40- 14 | AE | N | B | |
| VHi90LV17AW-1 | 26- 48 | AP | | B | |
| 〃 | 39- 42 | AP | | B | |
| VHi90LV27AW-1 | 40- 15 | AQ | N | B | |
| VHiD65943GJ-1 | 39- 43 | AY | N | B | |
| VHiD82825GM-1 | 40- 16 | BK | N | B | |
| VHiDS14C238// | 26- 49 | AT | | B | |
| VHiEEP64-120P | 26- 50 | AW | | B | |
| VHiEES04L400P | 39- 44 | AG | | B | |
| VHiFS781BZB-1 | 40- 17 | AP | | B | |
| VHiH8S2322R-1 | 39- 45 | AZ | | B | |
| VHiHG73C095-1 | 26- 51 | AY | | B | |
| VHiHN58V65A-1 | 39- 46 | AW | | B | |
| VHiKS0U1347-1 | 26- 52 | BN | | B | |
| VHiLCX157MT-1 | 26- 53 | AG | | B | |
| VHiLCX16244-1 | 26- 54 | AM | | B | |
| VHiLCX16245-1 | 26- 55 | AM | | B | |
| VHiLCX16373-1 | 26- 56 | AM | | B | |
| VHiLCX74MTC-1 | 26- 57 | AE | | B | |
| VHiLM324D++-1 | 39- 47 | AE | | B | |
| VHiLM339D++-1 | 39- 48 | AE | | B | |
| VHiLM393D++-1 | 26- 58 | AE | | B | |
| VHiLV25612J-1 | 39- 49 | AQ | | B | |
| VHiLVT240MT-1 | 26- 59 | AL | | B | |
| VHiM3064ATC-1 | 40- 18 | AX | N | B | |
| VHiM87J4810-1 | 26- 60 | BK | | B | |
| VHiMTD1361F-1 | 39- 50 | AR | | B | |
| VHiN2370R04-1 | 26- 61 | AF | | B | |
| VHiN2370R33-1 | 26- 62 | AF | | B | |
| VHiN2391D25-1 | 26- 63 | AG | | B | |
| VHiNJM317DL-1 | 26- 64 | AK | | B | |
| VHiNJU6356E-1 | 26- 65 | AK | | B | |
| VHiPi6C2309-1 | 26- 66 | AR | | B | |
| VHiPM2500++-1 | 26- 67 | BP | | B | |
| VHiPST598DN-1 | 26- 68 | AF | | B | |
| VHiPST598iN-1 | 26- 69 | AF | | B | |
| VHiS1340AF+-1 | 38- 12 | AH | | B | |
| VHiSD4M16L1-1 | 26- 70 | AZ | | B | |
| VHiSD8M16L1-1 | 26- 71 | BB | | B | |
| VHiSR1024-7LL | 26- 72 | AU | | B | |
| VHiT4955A20-1 | 26- 73 | BF | | B | |
| VHiTD62003AP1 | 39- 51 | AG | | B | |
| VHiTD62503F/- | 39- 52 | AG | | B | |
| VHiTD62503F-1 | 26- 74 | AF | | B | |
| VHiVHC244SJ-1 | 39- 53 | AG | N | B | |
| 〃 | 40- 19 | AG | N | B | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| VHP1LHEE-002A | 26- 75 | AC | | B | |
| VHP1LHLE-002A | 38- 13 | AC | | B | |
| VHPGP1A22LC-1 | 31- 38 | AK | | B | |
| VHPGP1A73A+-1 | 33- 33 | AG | | B | |
| 〃 | 34- 68 | AG | | B | |
| 〃 | 35- 10 | AG | | B | |
| VHPGP3A38//-1 | 31- 36 | AH | | B | |
| VHPLT9400E/-1 | 38- 14 | AK | | B | |
| VHV1608C080-1 | 26- 76 | AC | | B | |
| VHViCPS1.2/-1 | 26- 77 | AF | | B | |
| VRD-HT2EY101J | 38- 15 | AA | | C | |
| VRD-HT2EY102J | 38- 16 | AA | | C | |
| VRD-HT2EY163J | 39- 54 | AA | | C | |
| VRD-HT2EY302J | 38- 17 | AA | | C | |
| VRD-HT2EY331J | 38- 18 | AA | | C | |
| VRD-HT2EY471J | 38- 19 | AA | | C | |
| VRD-HT2EY911J | 39- 55 | AA | | C | |
| VRS-CZ1JD000J | 26- 78 | AA | | C | |
| 〃 | 39- 56 | AA | | C | |
| 〃 | 40- 20 | AA | | C | |
| VRS-CZ1JD100J | 26- 79 | AA | | C | |
| VRS-CZ1JD101J | 26- 80 | AA | | C | |
| 〃 | 39- 57 | AA | | C | |
| 〃 | 40- 21 | AA | | C | |
| VRS-CZ1JD102J | 26- 81 | AA | | C | |
| 〃 | 39- 58 | AA | | C | |
| 〃 | 40- 22 | AA | | C | |
| VRS-CZ1JD103F | 39- 59 | AA | | C | |
| VRS-CZ1JD103J | 26- 82 | AA | | C | |
| 〃 | 39- 60 | AA | | C | |
| VRS-CZ1JD122J | 39- 61 | AA | | C | |
| VRS-CZ1JD151J | 39- 62 | AA | | C | |
| VRS-CZ1JD183J | 26- 83 | AA | | C | |
| VRS-CZ1JD203J | 39- 63 | AA | | C | |
| VRS-CZ1JD220J | 26- 84 | AA | | C | |
| VRS-CZ1JD221J | 26- 85 | AA | | C | |
| VRS-CZ1JD222J | 26- 86 | AA | | C | |
| 〃 | 39- 64 | AA | | C | |
| 〃 | 40- 23 | AA | | C | |
| VRS-CZ1JD303F | 39- 65 | AA | | C | |
| VRS-CZ1JD303J | 39- 66 | AA | N | C | |
| VRS-CZ1JD330J | 26- 87 | AA | | C | |
| VRS-CZ1JD332F | 40- 24 | AA | | C | |
| VRS-CZ1JD332J | 26- 88 | AA | | C | |
| VRS-CZ1JD333J | 26- 89 | AA | | C | |
| VRS-CZ1JD470J | 26- 90 | AA | | C | |
| VRS-CZ1JD472J | 26- 91 | AA | | C | |
| VRS-CZ1JD511J | 26- 92 | AA | | C | |
| VRS-CZ1JD561J | 39- 67 | AA | | C | |
| VRS-CZ1JD562J | 39- 68 | AA | | C | |
| VRS-CZ1JD621J | 39- 69 | AA | | C | |
| VRS-CZ1JD624J | 39- 70 | AA | N | C | |
| VRS-CZ1JD681J | 39- 71 | AA | | C | |
| VRS-CZ1JD750J | 26- 93 | AA | | C | |
| VRS-CZ1JD752J | 39- 72 | AA | | C | |
| VRS-CZ1JD823J | 26- 94 | AA | | C | |
| VRS-CZ1JD911J | 39- 73 | AA | N | C | |
| VRS-RE3DA1R0J | 39- 74 | AB | | C | |
| VS2SB1197//-1 | 39- 75 | AC | | B | |
| VS2SC1740SR-1 | 38- 20 | AB | | B | |
| VS2SK3065++-1 | 39- 76 | AG | N | B | |
| VSDTA114YK/-1 | 39- 77 | AC | | B | |
| VSDTC114EK/-1 | 26- 95 | AB | | B | |
| VSDTC114YK/-1 | 26- 96 | AC | | B | |
| 〃 | 39- 78 | AC | | B | |
| VSDTC114YS/-1 | 38- 21 | AB | | B | |
| VSUPA502T//-1 | 26- 97 | AD | | B | |
| 〃 | 39- 79 | AD | | B | |
| VVLLM065HB1-1 | 29- 8 | CB | N | B | |
| 【X】 | | | | | |
| XBBS230P10000 | 35- 35 | AA | | C | |
| XBBSD30P06000 | 12- 51 | AA | | C | |
| 〃 | 34- 24 | AA | | C | |
| 〃 | 36- 2 | AA | | C | |
| 〃 | 41- 7 | AA | | C | |
| XBBSD30P12000 | 32- 4 | AA | | C | |
| XBBSD40P06000 | 30- 17 | AA | | C | |
| 〃 | 31- 3 | AA | | C | |
| XBBSD40P08000 | 36- 7 | AA | | C | |
| XBBSD40P10000 | 31- 39 | AA | | C | |
| XBBSD40P14000 | 31- 37 | AA | | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|
| XBBSE30P06000 | 30- 9 | AA | | C | |
| XBPSD26P06000 | 12- 26 | AA | | C | |
| 〃 | 41- 8 | AA | | C | |
| XBPSD30P05K00 | 31- 28 | AA | | C | |
| XBPSD30P06000 | 12- 47 | AA | | C | |
| 〃 | 41- 9 | AA | | C | |
| XBPSD30P06KS0 | 28- 2 | AA | | C | |
| XBPSD40P06KS0 | 31- 10 | AA | | C | |
| XBPSD40P16KS0 | 31- 29 | AA | | C | |
| XBTSC50P16000 | 27- 11 | AA | | C | |
| XBTSE40P06000 | 27- 15 | AA | | C | |
| XEBSD30P08000 | 32- 2 | AA | | C | |
| 〃 | 33- 18 | AA | | C | |
| 〃 | 34- 9 | AA | | C | |
| 〃 | 35- 6 | AA | | C | |
| XEBSD40P16000 | 33- 35 | AA | | C | |
| XEBSE30P08000 | 27- 22 | AA | | C | |
| 〃 | 33- 40 | AA | | C | |
| XEBSE30P10000 | 33- 30 | AA | | C | |
| XEBSE40P08000 | 27- 28 | AA | | C | |
| XEBSE40P10000 | 33- 6 | AA | | C | |
| 〃 | 35- 25 | AA | | C | |
| XEPSD30P05000 | 28- 11 | AA | | C | |
| XEPSD30P06X00 | 33- 23 | AA | | C | |
| XEPSD30P08000 | 29- 3 | AA | | C | |
| XEPSD40P06000 | 31- 47 | AA | | C | |
| XESSE30P08000 | 33- 28 | AA | | C | |
| XHBSD30P04000 | 30- 2 | AA | | C | |
| 〃 | 31- 6 | AA | | C | |
| XHBSD30P06000 | 27- 14 | AA | | C | |
| 〃 | 30- 25 | AA | | C | |
| 〃 | 31- 48 | AA | | C | |
| XHBSD30P08000 | 27- 25 | AA | | C | |
| XHBSD30P14000 | 34- 66 | AA | | C | |
| XHBSD40P06000 | 31- 46 | AA | | C | |
| XHBSE30P06000 | 12- 50 | AA | | C | |
| 〃 | 33- 4 | AA | | C | |
| 〃 | 34- 2 | AA | | C | |
| 〃 | 35- 34 | AA | | C | |
| 〃 | 41- 11 | AA | | C | |
| XHBSE30P10000 | 34- 71 | AA | | C | |
| XHBSE40P08000 | 27- 2 | AA | | C | |
| 〃 | 30- 11 | AA | | C | |
| 〃 | 33- 11 | AA | | C | |
| 〃 | 34- 41 | AA | | C | |
| XRESP20-04000 | 34- 54 | AA | | C | |
| XRESP30-06000 | 28- 6 | AA | | C | |
| XRESP40-05000 | 31- 43 | AA | | C | |
| XRESP40-06000 | 34- 11 | AA | | C | |
| XRESP50-06000 | 34- 27 | AA | | C | |
| XRESP70-08000 | 31- 21 | AA | | C | |
| 〃 | 31- 34 | AA | | C | |
| 〃 | 34- 29 | AA | | C | |

| PARTS CODE | NO. | PRICE RANK | NEW MARK | PART RANK | |
|---|---|---|---|---|---|

**CAUTION FOR BATTERY REPLACEMENT**

(Danish) ADVARSEL !
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää,jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s'il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type on d'un type équivalent recommandé par
le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekornmenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
Instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anwerisugen.

**CAUTION FOR BATTERY DISPOSAL**

(For USA,CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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